

# Air Conditioning & Refrigeration News

The Newspaper of the Industry

VOL. 30, No. 7, SERIAL NO. 586  
ESTABLISHED 1926Entered as second-class  
matter Aug. 1, 1927

DETROIT, MICHIGAN, JUNE 12, 1940

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Written to Be Read on Arrival

ISSUED EVERY WEDNESDAY  
\$4.00 PER YEAR

## Hartford Limits Trade-In Values To Best Models

### League Bars Allowances On All Ice Boxes In Line With '40 Price Schedules

HARTFORD, Conn.—Revising its refrigerator trade-in program to conform with 1940 new-refrigerator price schedules, the Hartford Electric League has adopted a policy eliminating allowances for ice boxes of any type, and permitting allowances on used mechanical models only when the price of the new refrigerator purchased is more than \$150.

In effect, this limits trade-in allowances to models in most manufacturers' "deluxe" series, and is a lever which dealers can use to increase their average unit sales price by vaulting the low-priced "special" models, where the prospect already owns an electric refrigerator.

When the used refrigerator to be taken in trade is more than five years old, allowances are limited to 10% of the price of the new refrigerator, provided this price exceeds \$150.

When the used refrigerator is less than five years old, and is not classified as an "exchange," the league recommends that it be traded by actual appraisal, based on a standardized trade-in schedule.

On remote control or conversion units taken in trade on new models, allowance is not to exceed \$10 per unit.

Adoption of the revised trade-in policy has proved a real money-saver for dealers, reports C. E. DeLaney, managing director of the Hartford league. This year's low prices and the consequent lowering of used refrigerator values have made dealers wary of excessive trade-ins, he says, and most of them have been sticking pretty closely to the new schedule.

## Dry Goods Association To Talk War, Pay Law

CHICAGO—Effects of the war abroad and defense plans at home on wholesale prices this fall, and a discussion of the effects of wage and hour law enforcement are two of the highlights of sessions of the mid-year convention of National Retail Dry Goods Association, to be held in the Palmer House here during the week of June 16.

Although no extended discussion of major appliances merchandising is scheduled during the convention, the question of "private brands" and the department store's attitude toward them will be considered in one speech at the merchandising division session on the morning of June 18.

Outlook for wholesale prices this fall will be discussed by Prof. D. J. Duncan, of the Northwestern university school of commerce, at the same session at which private brands selling will be considered.

Effects of wage and hour enforcement will be outlined by Col. Philip B. Fleming, administrator of the wage and hour division of the Department of Labor, at the store management group's session on June 17.

Retailers generally are interested in the administration of the wage and hour law, although local retailing is exempt from its provisions. Since federal legislation frequently sets a pattern for state laws, possibility of wage and hour regulation in the states will interest retailers. In his address, Col. Fleming will present one of the

(Concluded on Page 2, Column 5)

## SOUTH AMERICAN TRADE SHIFTS TO U. S.

### Europe's War Ends Germany's Barter System To Open New Markets For Refrigeration and Air Cooling

By Henry Knowlton

DETROIT—War that spreads disaster and death over Europe has ended Germany's barter system of trade with some Central and South American countries, thereby creating an unparalleled opportunity for American business, reports Ernest C. Burgin, export manager for Tecumseh Products refrigerating machines, with headquarters here.

On a recent business trip which included Cuba, Puerto Rico, Panama, and several South American countries, Mr. Burgin gained a clear picture of the present situation with respect to our neighbors to the south.

Colombia, the Dominican Republic, and Haiti are particularly affected by the loss of European markets. In recent years, coffee and other products have been "traded" for

German goods on a barter basis. Since this activity ceased, these countries have no market for their excess goods, Mr. Burgin says.

#### EXCHANGE DELAYED

While the Central and South American countries present growing markets for commercial refrigeration, doing business with them is not always a simple matter, due to the uncertainty of exchange, he declares. Cuban money has experienced a temporary drop of some 18%, and in South American countries exchange may be delayed anywhere from six weeks to two months, depending on local conditions.

Exceptions have been Venezuela, rich in oil, and Argentina, which exports large quantities of meat and grain to Europe. While Venezuela was booming last year, conditions are changing rapidly and exporters are apt to encounter a six weeks' delay in exchange at the present time, Mr. Burgin says.

#### BRIGHT SPOT

The bright spot is Panama, where the United States Government is spending millions to build new locks in the Panama Canal. The purpose of this change is to facilitate the movement of ships through the canal by reducing the time necessary to pass through the locks. It now takes a ship 10 hours to pass through the canal. When the new locks are completed, this time may be lowered to six or seven hours, depending on the size of the vessel.

Contractors, engineers, and government technicians have moved to Panama City in large numbers, Mr. Burgin states, making living quarters scarce. Rents are now higher than in the average American city, with

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## M.I.T. Gives Course In Refrigeration Service

BOSTON—The first annual Refrigeration Institute, a two-day "short course" consisting of lectures and demonstrations of refrigeration installation and service, will be held in Room 190, Building 1, of Massachusetts Institute of Technology on June 26 and 27.

The school is sponsored by the university extension division of the Massachusetts Department of Education.

Leo F. Carton, of Frigidaire, instructor in refrigeration at the Wentworth Institute, will lead the course, to be assisted by Henry Turner, of Minneapolis-Honeywell, and Robert Granfield, of Peerless, as guest lecturers. Sessions of the Institute will begin at 9:30 a.m. and continue until 4:30 p.m. each day.

Lectures and demonstrations, planned for refrigeration salesmen, dealers, installation and service men, and others interested in the industry, will review the fundamental principles underlying all mechanical refrigeration systems, with emphasis on problems which confront servicemen in the regular course of their everyday work.

## Angry Housewives Halt 'Blackout'

KEARNEY, Neb.—A city-wide "blackout" here, proposed as a publicity stunt in connection with a Red Cross funds drive, failed to materialize when housewives entered a vigorous protest against the idea, on the grounds that it would interfere with the operation of their electric refrigerators.

## Jobber Secretary



FRED B. HOVEY

## D. W. Russell Named New Airtemp Head

DAYTON, Ohio—D. W. Russell has been appointed president of Airtemp division of Chrysler Corp. by K. T. Keller, president of Chrysler. He succeeds Col. A. C. Downey, who has been granted an extended leave of absence from the Chrysler organization because of ill health.

Mr. Russell came to Chrysler Corp. in 1931, after 18 years of experience in both engineering and merchandising. In 1932 he was made a vice president of Chrysler's Fargo division, which position he held until last week, when he accepted his new post.

## Standards For Porcelain Enamel Meeting Topic

WASHINGTON, D. C.—Proposed commercial standards for porcelain enamel, exterior and interior, on household and commercial refrigerators will be the subject of a general conference of producers, distributors, and users to be held at 10:30 a.m. June 26 under sponsorship of the National Bureau of Standards.

The conference, which is open to all persons interested in this problem, will be held in the auditorium of the east building of the National Bureau of Standards, 4100 Connecticut Ave.

Copies of the proposed standards, TS-2855, have been mailed to more than 200 organizations for study and comment. The standards provide for the use of an identifying label which will assure the customer that the refrigerator has genuine porcelain enamel on exterior and interior, or either, as the case may be.

The meeting was called at the request of the Porcelain Enamel Institute, whose director of merchandising, Harry T. Ewald, will present the proposed commercial standards at the conference. F. W. Reynolds of the Bureau of Standards' division of trade standards will outline the procedure for establishment of commercial standards. Floor discussion

(Concluded on Page 24, Column 2)

## Servel's U.S. Policy on Guarantees Unchanged

NEW YORK CITY—Despite the fact that many eastern utilities are advertising 10-year guarantees on Servel Electrolux refrigerators, a New York official of Servel, Inc. has stated that there has been no change in this company's national policy in regard to guarantees.

Each utility establishes its own guarantee period, this official explained. Spokesmen for Consolidated Edison Co. here have stated that this utility and its system companies would continue the present five-year guarantee on the Servel line.

## F.B. Hovey Made Secretary Of Jobber Society

### Veteran of Association Activities Takes Over Reins of N.R.S.J.A.

CHICAGO—Fred B. Hovey has been appointed executive secretary of the National Refrigeration Supply Jobbers Association, the appointment going into effect immediately.

New executive headquarters of the NRSJA are at 28 N. Clark St., Chicago.

Mr. Hovey has had more than thirty years' experience in trade association work. Since Jan. 1, 1909 he has served as attorney and secretary of the American Surgical Trade Association. For 18 years (1911 to 1929) he served as attorney for the American Dental Trade Association. For 10 years (1918 to 1928) Mr. Hovey was attorney and manager of the Chicago office of the National Jewelers Board of Trade.

One of the founders of the American Trade Association Executives (the national association of

(Concluded on Page 24, Column 1)

## 12,000 Lockers Monthly On Iowa Plant's Program

SIOUX CITY, Iowa—Indicating that the rapid growth of the refrigerated locker industry is only the beginning of much greater development, the Master Refrigerated Locker Systems, Inc., of Sioux City, has announced that it is enlarging its factory to double its present capacity.

Production capacity will be increased from 6,000 lockers a month to more than 12,000, with a possible peak of nearly 14,000, state W. W. Wilson, president, and B. H. Vollmar, vice president. They explained that the purpose of the expansion was to enable the corporation to keep up with locker demands—demands, which they said, for several months have required the factory to run 24 hours a day.

Expansion measures, already underway, include a 40% increase in floor space, a 50% enlargement in the size of the enameling ovens now in use, and new equipment. Shipping room space will be increased and the sizes of the assembly and parts rooms doubled. Railroad and truck dock loading platforms will be added to those now in use.

Mr. Wilson says that Masterbilt lockers are being made in 18 different sizes to accommodate the requirements of various distributors. The models are of four general types, the Hydro-Loc, the Leader, the Saf-T-Loc, and Vapor-Loc, all described as of semi-airtight construction.

(Concluded on Page 24, Column 2)

## Australian War Measure Puts Surtax on Imports

SYDNEY, Australia—The Australian government has announced, effective May 3, a special wartime surtax of one tenth of the amount of import duty and primage tax, to apply on all imports except gasoline, the American Consulate General reports.

At the same time it was announced that the general Australian sales tax, applying to domestic as well as imported goods, had been increased from 6% to 8½%, of the duty-paid value in Australian currency increased by 20%, to apply as from May 3.

These are part of the revenue measures imposed by Australia to obtain funds for wartime needs.



## Engineering Groups Tour Laboratories

BALTIMORE—An afternoon tour of the technical laboratories of the University of Maryland and an evening program devoted to quick-frozen foods featured the April meeting of the Baltimore-Washington section of American Society of Refrigerating Engineers.

Laboratory tour, arranged by Dr. L. H. James, professor of bacteriology, and Dean Steinberg of the college of engineering, included inspection of the U. S. Bureau of Mines eastern laboratory, the U. S. Bureau of Fisheries research laboratory on preservation of fish, the University of Maryland engineering laboratories, the refrigeration rooms of the horticultural department, quick-freezing laboratory of the poultry department, and the bacteriology department research laboratory.

National President George Hulse and National Secretary D. L. Fiske were speakers at a dinner in the Lord Calvert hotel. Evening session, presided over by Section Chairman Ottenheimer had as speakers James F. Hale, of Seabrook Farms, Bridgeton, N. J., who discussed frozen foods processing and control; J. J. Antun, of Merchants Terminal Corp., New York City, who talked on storage and transportation; and J. D. Baker, of the product development department of E. I. du Pont de Nemours & Co., Inc., who discussed packaging and distribution. Mr. Baker's talk was illustrated with a motion picture.

## Confer on Cooling



Henry Knowlton of the News' editorial staff talks over air conditioning industry problems with George C. Mueller, advertising manager of General Refrigeration Corp., manufacturer of Lipman refrigeration at Beloit, Wisconsin.

## St. Louis Furniture Store Becomes G-E Dealer

ST. LOUIS—Goldman Bros. Furniture Co. has been appointed a full-line General Electric dealer here. Full-page newspaper advertisements were used to announce the firm's appointment. James Co., G-E distributor, claims that appointment of Goldman's gives it "full coverage" in the St. Louis downtown area. Several other large downtown stores also handle the General Electric appliance line.

## Two Scientists Win Swedish Award For Making Electrolux Discovery

EVANSVILLE, Ind.—A rare engineering award, the Adelskold gold medal, has recently been granted to Baltzar von Platen and Carl G. Munters, both Swedish scientists, in recognition of their discovery of the refrigeration principle used in the Servel Electrolux gas refrigerator, according to an announcement from Servel, Inc.

The award was made by the Royal Swedish Academy of Science on March 31, the presentation having been made by Crown Prince Gustav Adolf on the occasion of the annual meeting of the academy.

"The discovery by von Platen and Munters of the refrigerating principle—the making of cold from heat, which made the development of the gas refrigerator possible, occurred 17 years ago, when the discoverers were students in the Royal Institute of Technology at Stockholm," the announcement explained.

### DELAY UNAVOIDABLE

"Granting of the medals to the former students after so long a period was due to the fact that under the terms of the award, after an invention or discovery has been made, it must be used for a number of years in order to prove that it is a commercial success.

"Edison, the first scientist to be honored, received the medal in 1909 in recognition of his work as the originator of the phonograph and the

electric light bulb. Only five medals have been given in all since the award was instituted by Claes Adelskold in 1906. In 1914, a Swedish engineer, Mr. Ljungstrom, received the award for his achievements and inventions in the steam turbine field, and in 1920, two other Swedish engineers, Mr. Ramen and Mr. Beskow, were honored for their work in connection with methods for refining calcined copper pyrites.

### DISTINGUISHED MEMBERSHIP

"The Royal Swedish Academy of Science, under the jurisdiction of which the Adelskold award is administered, is a leading scientific society in Sweden, its membership being composed of 100 native and 100 foreign scientists who are leaders in their respective fields.

"Von Platen and Munters have had previous recognition for the discovery which gained for them the Adelskold award, having received the Polhem medal from the Swedish Society of Engineers in 1925, and a medal granted by the Franklin Institute of Philadelphia in 1927."

## Post \$250 in Prizes For Selling Letters

NEW YORK CITY—Cash awards totaling \$250 are being offered by the Commercial Electric Cooking Council to salesmen of commercial electric cooking equipment for the best letters on "How My Customers Profit from the Use of Electric Counter Cooking Equipment."

This contest, scheduled to run from June 10 to Aug. 31 inclusive, is open to any dealer or utility salesman in the United States who sells this type of equipment.

Papers are limited to 1,500 words. They may be illustrated by photographs, but this is not essential. Awards will be based 80% on the value of the profit ideas expressed, 10% on clarity of expression, and 10% on neatness.

First prize in the contest will be \$100 in cash. There will be a second prize of \$50, a third prize of \$25, a fourth of \$15, and six other awards of \$10 each.

Purpose of the contest is to round up valuable sales ammunition which can be used in the general promotion of commercial electric cooking and which will ultimately benefit all salesmen of this type of equipment by fortifying them with a sounder, more convincing profit story.

## Canadian Locker Conference Attracts 50 Visitors

GUELPH, Ont., Can.—First Ontario locker storage conference was held May 15 at Ontario Agricultural College here. About 50 persons attended the morning and afternoon sessions.

Program, under the direction of Dr. J. H. L. Truscott of the horticulture department of the college, consisted of an address on insulation by Dr. Truscott, and a talk on micro-organisms by E. Gerrard of the college department of bacteriology.

Dr. Truscott also discussed the preparation and use of frozen fruits and vegetables, and gave a review of publications on the freezing of meat and poultry. W. C. Wright addressed the group on plant layout, and W. J. Strong, federal inspection service, outlined the government regulation of frozen products. J. C. Vidt discussed wraps and packages.

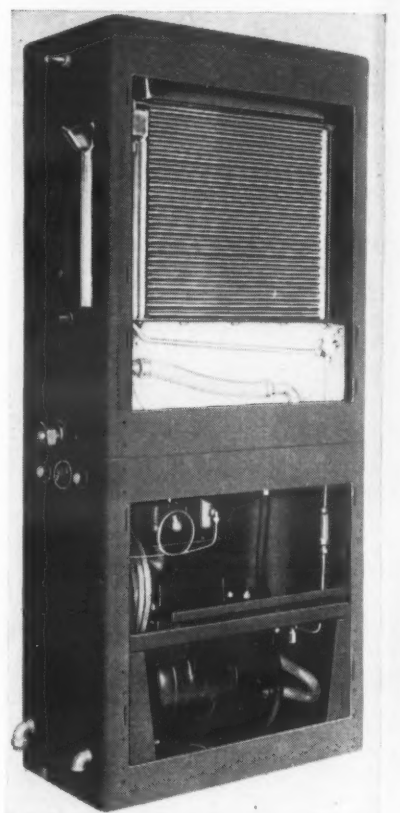
## NRDGA To Study Store Display and Lighting

(Concluded from Page 1, Column 1) indirect angles of the administration of the federal law, its effect on purchasing power in the community.

The question of store modernization also will be considered in a store management session on the morning of June 19, with one of the speakers being James M. Ketch, illuminating engineer of General Electric Co., whose topic will be "What's New in Store Lighting?"

Sessions of the sales promotion division will be concerned with "eye appeal" and how to create it, with methods of increasing sales by featuring related items of merchandise in close proximity to each other, modern art technique in advertising, interior display for better merchandising and greater customer convenience, and the "minute movie" as a visual means for increasing sales among subjects scheduled for consideration.

## York Uses Stainless Steel Plates In Water Cooler



YORK, Pa.—Self-contained water coolers utilizing stainless steel plates of the "baudelot" type have been announced by York Ice Machinery Corp. Housed in a taupe finished cabinet measuring 36 inches wide, 21 inches deep, and 86½ inches high, the units are available in four capacities.

Models R3W1 and R3W2 are equipped with 3-hp. compressors, producing 126 and 161 gallons of cold water per hour, using one and two plates, respectively. The units are rated at water inlet temperature of 70° F., and 45° outlet temperature.

Models R5W2 and R5W3 have 5-hp. compressors and produce 237 gallons and 270 gallons of cold water per hour, using two and three plates, respectively. The water coolers are applicable to jobs using circulating systems, or for continuous direct cooling.

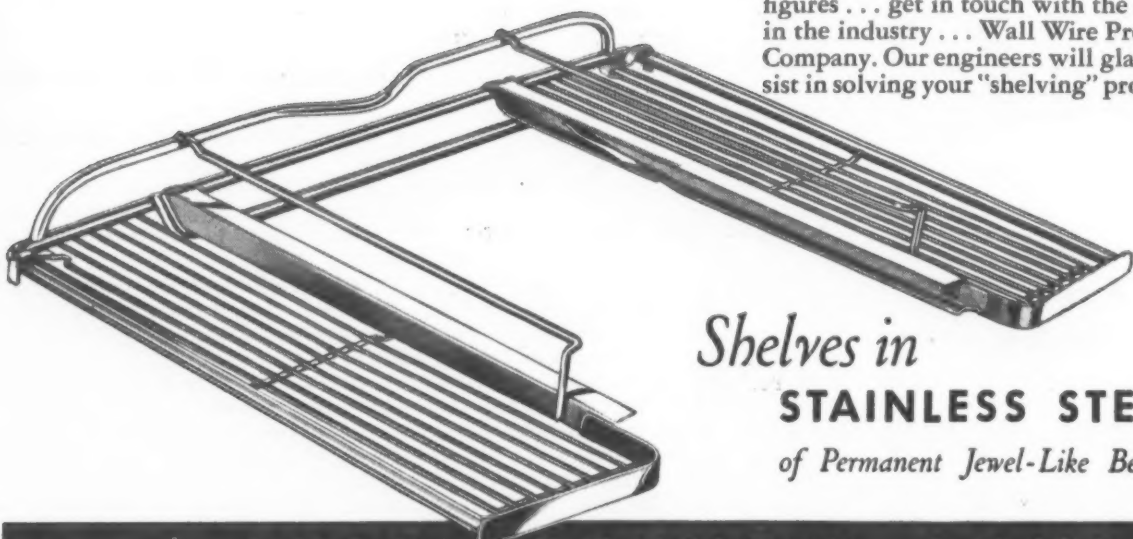
## W. H. Aubrey Is Elected Frick Co. Director

WAYNESBORO, Pa.—W. H. Aubrey, vice president of Frick Co. and sales manager of its ice and refrigerating machinery department, has been elected to the company's board of directors.

Mr. Aubrey has been with Frick for nearly 23 years, having been sales manager since 1932.

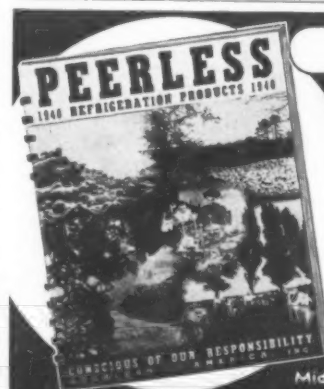
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of  
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For Your Make of Domestic REFRIGERATOR  
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Are you "deep" in the plans for your 1941 models? Then be sure to consider that mighty forward step your industry has taken . . . the installation of stainless steel shelves as standard equipment! 1941 will see others get in line . . . to meet public demand. Will you be among them? For facts and economy figures . . . get in touch with the leader in the industry . . . Wall Wire Products Company. Our engineers will gladly assist in solving your "shelving" problem.



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**Peerless  
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# ANOTHER GREAT TRAFFIC BUILDER FOR CROSLEY DEALERS

*A REAL SUMMER SPECIAL—IN A BIG DE LUXE "8" backed by national newspaper advertising in key cities and a full line of dealer promotional helps. Check it against any kind of competition!*

# "8" CROSLEY SHELVADOR

WITH  
DE LUXE FEATURES  
FOR ONLY

**\$149<sup>95</sup>**

\* ALL PRICES  
SLIGHTLY HIGHER  
IN THE FAR WEST

THE PRICE OF MANY A "6"



Again Crosley leads the way to greater refrigerator profits. Here is a traffic-builder that gives you the profit of a big "8" from the customers that are now buying "stripped 6's." It not only steps up your unit sale, it opens up an entirely new market. A market made for you by Crosley. It will beat any kind of competition. Surveys show a high percentage of families need a larger refrigerator and in the summer time they need it worst of all. Sales show women want Shelvador and Freezorcold. Now they get both in big Crosley "8" with de luxe features for only \$149.95. Extra roomy Shelvador, extra freezing space, extra ice, extra 8 cu. ft. capacity—is that a bargain? The housewives will want this summer special and don't forget their husbands have two weeks vacation pay in their pockets right now. Now is the time to cash in.

*From coast to coast comes the news that thousands are flocking to buy another Crosley Traffic-Builder. The Crosley "6" with Shelvador and Freezorcold for only \$109.95\**

REFRIGERATION  
DIVISION

**THE CROSLEY CORPORATION**

Listen to WLW—"The Nation's Station"—70 on Your Dial.  
POWEL CROSLEY, JR., PRESIDENT

CINCINNATI  
OHIO



## Air Conditioning Cools Denver Sports Store

DENVER—Complete air conditioning in all departments is one of the important features in the elaborate new store of the Max Cook Sporting Goods Co. here.

Since sport fans will seem to go almost anywhere to buy the equipment needed for pursuing their favorite hobbies, many sporting goods dealers, even in the hottest localities, have not seemed to consider air conditioning essential. Their theory seems to have been that if you have the merchandise, sportsmen will buy it regardless of conditions in the store.

Max Cook, however, looks at it in an entirely different way. His belief has been that in any line of business, the easier you make it for the customer to buy, the more business you're going to do. "And," as he points out, "air conditioning certainly makes it easier for the

customer to buy. If he comes into your store during the hot summer months and finds it cool and comfortable, he's going to remember the place. And for the very reason that he is comfortable, he'll stay in the store longer and buy more.

"We spent a lot of money for the newest thing in lighting to make the merchandise show up to best advantage. We spent a great deal of time and money designing and installing open display fixtures which would create demand for the goods we sell. I would have been foolish after doing all these things not to provide a cool, properly conditioned atmosphere," Mr. Cook said.

## New Firm Specializes In Humidification Systems

KANSAS CITY, Mo.—New firm in the air conditioning field here is Rexair Sales & Service Co., 1608 Baltimore Ave., headed by T. F. Wood. The company will specialize on humidification systems.

## Sound Control Studio At Rensselaer Institute

TROY, N. Y.—Sound control problems in air conditioning will be studied under a cooperative project at Rensselaer Polytechnic Institute, sponsored by American Society of Heating & Ventilating Engineers.

The Rensselaer investigations are planned to develop a technique for measuring sound inside a duct and at the room outlet. Effect of duct size, thickness of metal, bends, elbows, turning vanes, and splitters also will be studied.

## J. B. Embry Dies; Was N.A.P.R.E. Founder

OKLAHOMA CITY, Okla.—J. B. Embry, 68 years old, operator of Embry Refrigerating Co. here, died recently after an illness of two weeks. He was one of the founders of the National Association of Practical Refrigerating Engineers.



**A Quick Trick for Ice Cubes in a Flash!**

*Out of the Sleeve—Instantly*

A slight forward pull of the fingers on the tray lifter instantly loosens the Inland Shucker Tray from the sleeve.

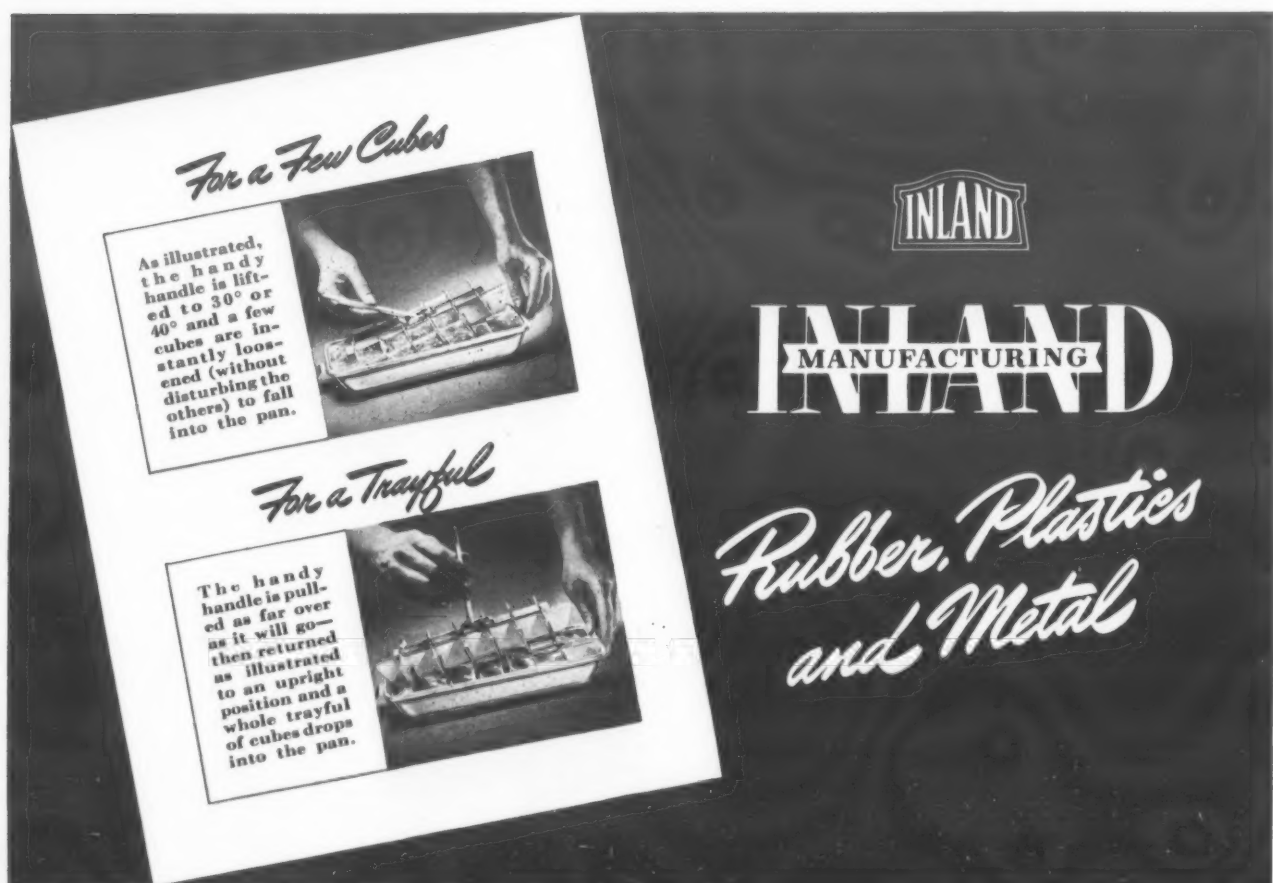
## THE INLAND SHUCKER ICE TRAY

The Inland Magic Finish Shucker Ice Tray is the standout choice for maximum convenience when friends drop in and a few ice cubes or a brimming bowlful are needed.

A touch on the tray lifter and the fast freezing Shucker Tray is out of the freezing compartment in a flash—then simply lift the handy handle and get a few ice cubes or a trayful, full-sized and unshattered, in less time than it takes to tell it.

The carefree convenience of the Inland Magic Finish Shucker Tray is easy to demonstrate and sell. That's why it's ideal as original factory equipment by refrigerator makers as well as for replacement sales by dealers. For details, prices and discounts write to

INLAND MANUFACTURING DIVISION  
GENERAL MOTORS CORPORATION  
DAYTON, OHIO CLARK, NEW JERSEY



**For a Few Cubes**

As illustrated, the handy handle is lifted to 30° or 40° and a few cubes are instantly loosened (without disturbing the others) to fall into the pan.

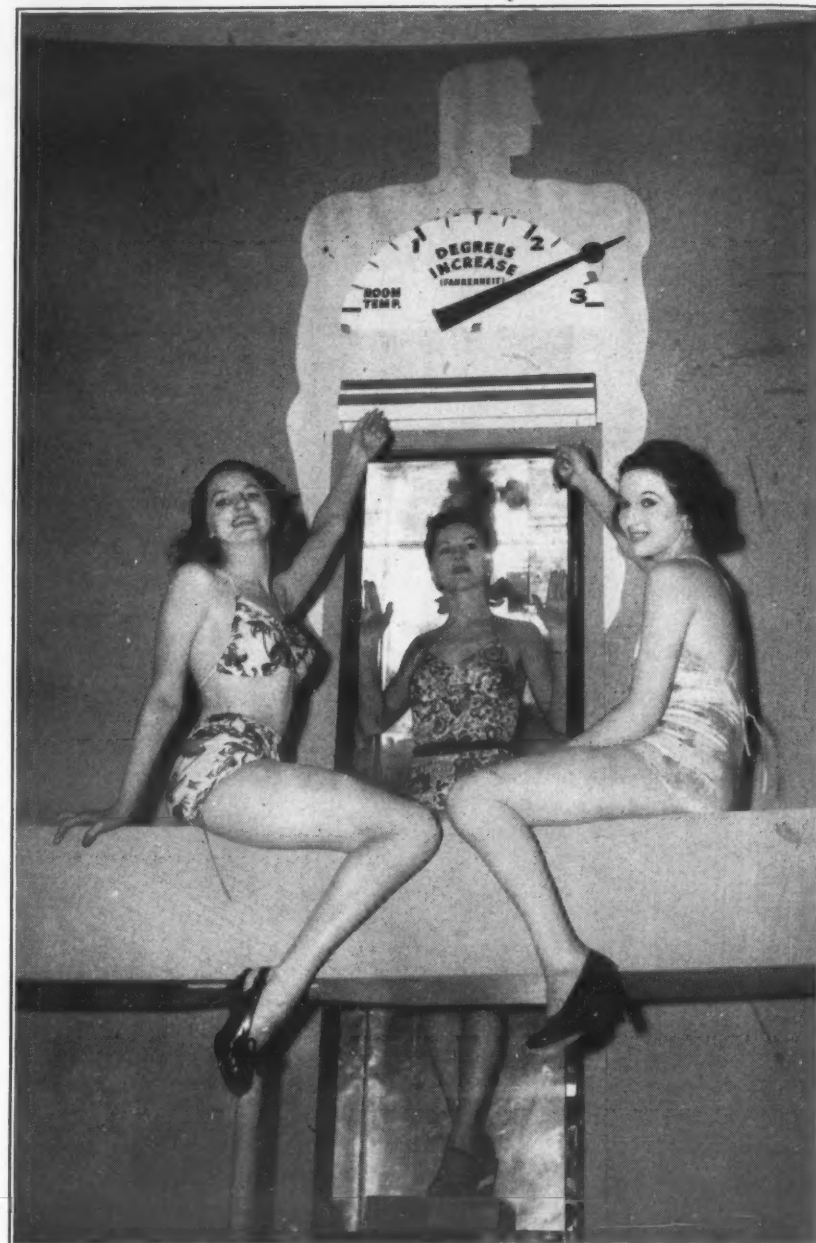
**For a Trayful**

The handy handle is pulled as far over as it will go—then returned as illustrated to an upright position and a whole trayful of cubes drops into the pan.

**INLAND MANUFACTURING**

*Rubber, Plastics and Metal*

## Redheads Hottest—Engineers Prove It



Redheads, blondes, and brunettes engaged in a novel experiment at the "Human Furnace," device for measuring heat given off by the human body, featured in the Carrier Igloo of Tomorrow, air conditioning exhibit at the New York Fair. Blonde Gudrun Hansen is testing the scientific chamber while redhead Mitzi Fertel (left) and brunette Mary Stiles await their turns. Mitzi "kicked the dial" all the way around and helped redheads triumph.

NEW YORK CITY—Air conditioning science stepped in to prove once and for all that redheads actually are "hotter" than blondes or brunettes, in the first actual test of the "Human Furnace," a device featured in the Carrier air conditioning exhibit at the New York Fair.

The "Human Furnace" contains highly sensitized instruments developed in the Carrier research laboratories, and records heat given off by the body to a fraction of a

degree Fahrenheit.

Use of this sort of device will provide information to engineers as to the "heat load," or total amount of heat generated by large assemblages in confined areas, which is essential in computing air conditioning needs.

Through this and similar tests, engineers may estimate with reasonable accuracy the capacity loads in auditoriums and buildings accommodating large numbers of persons.

## Sam's Selling Slants

V. E. ("Sam") Vining, supervisor of department store sales for Westinghouse, is the industry's most colorful salesman. This is the second of a series of Sam's famous "Selling Slants" messages to salesmen. An earlier series was published in the News in 1937, and later appeared in book form. Snapshot by the editor.



### SALES MANUAL

Ten inches in the past from my present waistline—

A public dance hall in Cleveland: Merry Maidens; Handsome Swains; tons of Chewing Gum; all moving to the beat of the director's baton as though he were mixing a human salad and were about to add the dressing.

Says I to the best-looking unattached girl in sight, "Might I have the pleasure of this dance?"

Says she, "I don't care to dance"—

—And headed for the dance floor with a truck driver who evidently had a better formula.

Says I to the second-choice candidate, "Please, may I have this dance?"

Says she, "No!"—

And then walked off with a motorman whose sales talk I decided to copy.

Then,

Says I, to the Queen of 'em all, as I grabbed her arm and tried to look like a steam-shovel operator.

"Com'on, Kid, this 'un's ourn."

Says she, later,

"I could die waltzing with you."

Proving

Life is its own sales manual.



## 'Golfers' Pile Up 433 Sales In 6-Weeks' Mass. Campaign

GREENFIELD, Mass.—Setting a hot pace on the back nine, "golfers" in the six-week golf tournament-refrigerator sales campaign recently completed by Western Massachusetts Electric Co. hung up a score of 433 refrigerator sales in the drive.

Salesmen teeing off in the campaign were shooting for high scores and prize money for sales. In setting up the prize awards, the salesmen were divided into three groups—"pros," "amateurs," and "dubs." Those making over 19 sales were in the pro class, those making 10 to 18 sales were in the amateur class, and those making five to nine sales were put with the dubs. A special "also ran" class was for those making less than five sales.

Top money winner in the "pro" class was Wilder Weeks, of Weeks' Electric Store, who was awarded the \$25 first prize. Second money of \$15 went to Jack Dyer, of Wilson's Department Store, and John Teahan, of Sears-Roebuck in Greenfield, took the third prize of \$10. Others qualifying in the pro class were: Emile Deneault, LaCroix Electric; Gene Prondecki, Franklin Electric; Frank Hines, Sears-Roebuck; P. N. Burnap, Shelburne Falls; Ed Truehart, Manchester-Forbes; Leon Kohler, L. A. Kohler Co.

First prize of \$15 in the "amateur" group was won by Harry Jeffway, of Jeffway Electric Co. Second money of \$10 went to A. A. Pelkey, of Sears-Roebuck in Northampton, and third place and \$5 went to C. E. Williams, of Gill. Other "amateurs" were: Norm Brown, Griggs Electric; Dan Fungaroli, Amherst Oil; Frank Deeley, Electric Equipment Co.; Ben Wainshal, Wainshal Furniture Co.; Bill Manix, Sears-Roebuck, Greenfield.

Top man in the "dubs" class was Ed Parsons, Parsons Electric Co., who won \$10. Tied for second and third, and receiving \$5 each, were Ed Shippee, of Shippee Electric Co., and Bob Nye, of Robt. H. Nye-Ashfield.

## 'Courtesy' Demonstration Pays \$25 Bonus

OKLAHOMA CITY, Okla.—Because he took the trouble to give a complete demonstration after two of his fellow dealers had muffed their opportunity, Al Robertson, newly appointed Westinghouse dealer here, won a \$25 bonus for himself on a prize-winning entry by Mrs. Hattie W. Smith, of Norman, Okla., in the Westinghouse "Advise-a-Bride" national contest.

Mrs. Smith, who was awarded a Westinghouse range for her letter, wrote that when she called at Mr. Robertson's store for an entry blank, he took time to explain the features of each appliance "as carefully and courteously as though he expected to close with my name on the dotted line."

The dealer in her home town was not supplied with blanks, Mrs. Smith reported, and another dealer on whom she called for information regarding the contest pointed to where the blanks were lying, but did not bother to hand her one personally, nor even to rise from his seat.

## Green Bay Appliance Show Plays To Big Audience

GREEN BAY, Wis.—The Green Bay Home Show at the Columbus auditorium here attracted thousands during its run, May 21 to 24. Appliance exhibitors included the Green Bay Hardware Co., Sears, Roebuck & Co., La Plants, Schleis Radio & Appliance, Hobbins Electric Store, Van's Hardware, Knoeller Electric Co., Wisconsin Public Service Corp., and the Pomprowitz Stores.

## Tennessee Dealer Moves To New Location

CHATTANOOGA, Tenn.—Frank M. Carryl, appliance dealer here, has moved to a new location at 4117 Tennessee Ave. The firm's former location was 1409 Union Ave.

## Chattanooga Planning An 'Appliance Mart'

CHATTANOOGA, Tenn.—Erection of an electrical appliance mart which will serve as a cooperative display and demonstration floor for local dealers and will "make Chattanooga the electric center of the Tennessee Valley" is planned by this city's Electric Power Board, according to L. J. Wilheite, chairman.

Ground floor of this new building will be devoted to display and demonstration space which will be made available to the city's electrical appliance dealers, Mr. Wilheite said.

He also made it clear that the Board has no intention of ever entering the appliance merchandising business, but merely was endeavoring to cooperate in every way with independent dealers here. These dealers, Mr. Wilheite pointed out, set a new record in April by piling up sales totaling \$271,625.

## Crosley Sales Average \$147 In Baltimore

BALTIMORE—Average unit price of refrigerators sold so far this year by Lincoln Sales Corp., Crosley distributor for the Baltimore-Washington, D. C. trading area, has been \$147, reports C. H. Buchwald, president of the organization. And this despite the fact that Crosley offers three models at \$119 or below.

The company also has shown a decided increase in unit volume.

## Green Bay Dealer's Sales Already Highest Ever

GREEN BAY, Wis.—The Green Bay Hardware Co. in the first four months of 1940 sold and delivered more Frigidaires than in any complete year in its history as a Frigidaire dealer, reports L. E. Drossart, sales manager.

## Spring Drive Nets 400 Sales In W. Va. Area

HUNTINGTON, W. Va.—A cooperative six-week advertising campaign conducted this spring by 18 electric refrigerator dealers was reported to have resulted in total sales of 400 units with a sales value of \$52,514. Total of 36,603 lines of advertising was used in the three local newspapers.

The cooperative campaign was undertaken because a similar effort on radios in February proved successful. Dealers sold 410 radios during this drive.

## St. Paul Dealer Completes \$10,000 Expansion

ST. PAUL—Weyland Furniture Co. here, full-line electrical appliance dealer, has recently completed an expansion at a cost of \$10,000.

## Rocky Mountain Sales Up 54% For Quarter

SALT LAKE CITY—First-quarter refrigerator sales of all Rocky Mountain electrical appliance dealers served by Utah Power & Light Co. this year were 54.7% ahead of the corresponding period of 1939. Sales of all appliances by these dealers for the three-month period were 8.3% above first quarter sales of 1939.

## Buys By the Carload

DUNN, N. C.—Dunn Furniture Co. took on the Frigidaire line recently, and promptly placed an order for a carload of refrigerators and ranges. Mr. Brannan is manager.

## Opens Remodeled Store

SYRACUSE, N. Y.—The Fox Electric Supply Co. has opened its remodeled store at 827 S. Townsend.

# Keep Your Unit Sale UP!

with

## PHILCO ADVANCED DESIGN!



Philco's famous ADVANCED DESIGN brings real *extra* services that are *worth the money* to the buyer! It puts the emphasis on *quality* and *service* instead of price... giving you what you need to **SELL UP** to the higher price, bigger profit brackets.

**Fastest-Selling Quality Refrigerator on the Market!**

The Philco LH-6 already is the quality leader in the refrigeration field... selling *in volume* at a higher price and a *bigger profit* to the dealer. No other refrigerator at any price offers so many valuable services and conveniences. The Horizontal Evaporator and Giant-Size Frozen Food Compartment... the Conservador... Dry Cold and Moist Cold Compartments... give you sensational sales appeals found *only* in the Philco Refrigerator.

Yes, it's **YOUR** one opportunity to really **SELL UP** for greater refrigeration profits. Don't miss it! See your distributor now!

# PHILCO ALL YEAR 'ROUND

HOME RADIO • PHONOGRAPHS • TELEVISION • AUTO RADIO • RADIO TUBES • PARTS • REFRIGERATORS • AIR CONDITIONERS • DRY BATTERIES



## THE LAST WORD—

—Belongs To Frigidaire's Home Economists  
When It Comes To Testing Home Appliances

DAYTON, Ohio—Feminine members of the population reputedly possess the ability to have the "last word," a condition which is sometimes the cause of heated controversy but which frequently, as well, saves men from making tactical blunders; such as, for example, designing and selling an electric refrigerator planned and constructed entirely from the male viewpoint.

Many thousands of dealers and salesmen know that Frigidaire has a home economics department; but their picture of the work of this department probably includes only a part of its actual activity. Creating new recipes, while an important phase of home economics work, represents just one segment in the overall function of the Frigidaire home economics department.

An essential and fundamental phase of Frigidaire's home economics activity consists of testing the practicability of various developments conceived by the company's engineers. In this important work, the department serves not only the company, but everyone interested in the sale of Frigidaire equipment, as well as the interests of the buyer and user.

To the uninitiated, testing a house-

hold electric refrigerator or range, to determine whether its features will perform exactly according to the designers' intentions, may appear to be simply a matter of mechanical checking. But thorough testing goes much further than this.

Complete tests include careful consideration of the "human" factor—the element related to actual use of the appliance in the home. The "last word" of a woman is of vital concern here, for the home economics worker conducting a test makes her observations from all angles: that of the manufacturer, of the dealer and salesman, and of the eventual user.

During the development of new features, the home economics test kitchen cooperates closely with the engineering department. In addition to rigorous mechanical testing, the new features must pass muster in the home economics test kitchen where all tests are made that involve food preparation and product performance.

Individual features are subjected to a series of tests on an experimental basis, after which they are made a part of new models. A second series of tests is then conducted on the completed preliminary

models, to demonstrate that all features perform satisfactorily.

Obviously, anyone testing an appliance feature cannot do so without knowing what to look for; so it is natural that during the years Frigidaire has been using home economics product testing as a means of perfecting its products, a veritable "bible" of standards has been developed.

For instance, recipes used in testing products and new features are all standardized. The nature of ingredients, the amounts, method of preparation, cooking time, and temperature all are carefully worked out. In addition, quality and final appearance of the finished product must be determined and standardized. Only after this procedure does a recipe become a "measuring stick" for judging the performance of a new feature or a new model.

When such precautions are taken in testing, it is safe to conclude that the homemaker who ultimately buys the appliance will achieve similar results simply by following the directions developed by the home economics department.

### AIDS SALESMEN AND USERS

The test kitchen personnel's knowledge of foods, of products and what they are expected to do, and a complete comprehension of what an appliance is supposed to do in a home, are distinct assets not only to the eventual buyer and user but to the dealer and salesman who must present these appliances to the public.

Without the test kitchen, it would be difficult to provide dealers and salesmen with authentic information

on product performance, except from a mechanical standpoint. Buyers are primarily interested in what the appliance will do, or in its use features. Test experts in the home economics department interpret appliance usage in the home by translating its mechanical advantages into the more familiar terms of the kitchen.

When new features are developed, too, it must be ascertained what claims can be made for them.

A case in point is that of savings to be gained by the homemaker through the use of the product. With its refrigerator, Frigidaire emphasizes the economy of certain methods of food buying, such as purchasing a week's supply of foods on a special bargain day. This claim was made only after exhaustive tests in the home economics department under conditions simulating those in the home.

### TEST IDEAS FROM FIELD

Other claims, such as storage capacities for the hydrator and the meat tender, are authenticated before being used, as are claims listed as advantages in the preparation of food in both the refrigerator and range.

In the case of the range, one experiment is that conducted with various utensils utilized in the oven and on surface heating units to demonstrate which utensils may be used with greatest economy and convenience. Here, again, the test kitchen workers serve the dealer, salesman, and user.

Tried out in the test kitchen, too, are ideas which come in from the field. The kitchen staff examines these suggestions to determine if they might be included in the use of the company's products, or, in the case of food preparation ideas, if they are an improvement over existing methods. The test kitchen, in fact, a "two-way" clearing house where ideas originating both in the engineering laboratory and in the field may be subjected to the precision testing which either proves or disproves the practical usefulness of the suggestion.

### DEPARTMENT'S GROWTH

Frigidaire's home economics department has not always included in its scope all of the activities in which it now engages. Established on March 17, 1928, the department originally devoted a large share of its time to creation and adaptation of recipes and recipe books pertaining to electric refrigeration.

It soon became apparent, however, that product testing and related duties could be an essential part of the department's function. Today, housed in modern quarters equipped for systematic and scientific product testing, the department serves in a number of capacities.

Besides product testing and development of new recipes, the home economics department also operates a training kitchen in which home economists from all over the nation may obtain instruction in the use of the company's electric refrigerator and range. A separate room, containing all necessary cooking and refrigeration equipment, as well as work surfaces, cabinets, and tables is used for training schools.

### New Kelvinator Washer Priced At \$59.95

DETROIT—A new washer, model 6-DS, has been introduced by Kelvinator. Priced at \$59.95, the new washer was designed to give dealers a low-priced model with the "Fabric-Saver" wringer, it was announced.

The Kelvinator washer "step-up" plan now includes models priced from \$39.95 to \$94.95.

In addition to the "Fabric-Saver" wringer, the new model has a three-vane type agitator with bronze bearings on the center post and in the bottom of the unit. Kelvinator "silent-mesh" transmission is standard on the new model.

Tub on model 6-DS is of white porcelain enamel with a diameter of 21½ inches and a height of 13½ inches, mounted on rubber. Tub cover is galvanized steel with white baked "Permalux" finish.

The new model has a washing capacity of 8 lbs. It is built to take an automatic drain pump as optional equipment.

## Ala. Water Heater Salesmen Scrap For \$1,000 In Prizes

BIRMINGHAM, Ala.—"It's In The Bag," a state-wide electric range and water heater campaign, sponsored by Electrical Appliance Dealers Association of Alabama, has \$1,000 in cash prizes offered as sales boosters. Quota for the drive has been set at 2,000 units.

All dealers in the territory of Alabama Power Co. are eligible to compete for the prizes. Territory has been divided into six sections, with a quota set for each section.

To the section exceeding its quota by the greatest per cent, each person in the section making a sale of a new electric range or water heater will receive \$1.25 per unit. Each person in the section exceeding its quota by the second greatest per cent will receive 80 cents for each unit sold. The section with the third greatest per cent qualifies each salesman for 50 cents on each unit sold. Used ranges will count in the quota, but cash bonuses will be paid only on the sale of new units.

Dealers in Mobile subscribed an extra \$150 to underwrite a deep sea fishing trip for their salesmen if they sell four units during the campaign. They are also offering \$25, \$15, \$10, and \$5 to the salesmen selling the most units during the activity.

"It's In The Bag" started off with a teaser mailing to all salesmen. This teaser was a plain paper bag with the words "It's In The Bag" printed on it. Following this was another "bag" mailing telling salesmen that details of the campaign would follow. Third mailing had all the details of the campaign in a large bag.

Each Monday during the campaign a cartoon bulletin telling the standing of the different sections is mailed out as a "pep" notice.

The following distributors are cooperating in the campaign: Watts-Newsome Co., Frigidaire Corp., Alabama Appliance Co., Graybar Electric Co., Matthews Electric Supply Co., Moore-Handley Hardware Co., R. P. McDavid & Co., Birmingham Electric Battery Co., Steel City Appliance Co., Stewart-Warner Distributing Co., and Nash-Kelvinator Corp.

### April Washer Shipments 16% Above 1939

CHICAGO—A total of 135,179 washing machines were shipped during April, a 16% increase over shipments for April, 1939, according to figures released by the American Washer & Ironer Institute. Ironer sales were up nearly as much, with 11,984 units shipped during the month.

Washer shipments for the first four months of the year totaled 546,455; ironer shipments for this period reached 44,588.

Average retail price of washers continued on the upgrade to reach \$72.38 for the four-month period, compared to \$69.06 a year ago. Retail price of ironers shipped during the first four months averaged \$68.68, against \$71.45 in 1939.

**MASTERCRAFT**  
**ADJUSTABLE**  
**PAD**  
**and**  
**CARRYING**  
**HARNESSES**

Efficient, sturdy and economical. Provides superior handling and thorough protection of refrigerators. Pad and harness are separate units and both adjustable to practically all styles and sizes of cabinets.

Adjustable Pad \$9.75 each  
Adjustable Harness \$6.25 each  
f.a.b. Chicago.

Lettering on pad at only \$1.00 per order extra. Write for latest folder and prices on pads for refrigerators, washers, ironers, ranges, radios, etc.

**BEARSE MANUFACTURING COMPANY**  
INCORPORATED IN ILL.  
3815-3825 Cortland Street, Chicago, Illinois



## THE FINISH OF THE NATIONAL OPEN

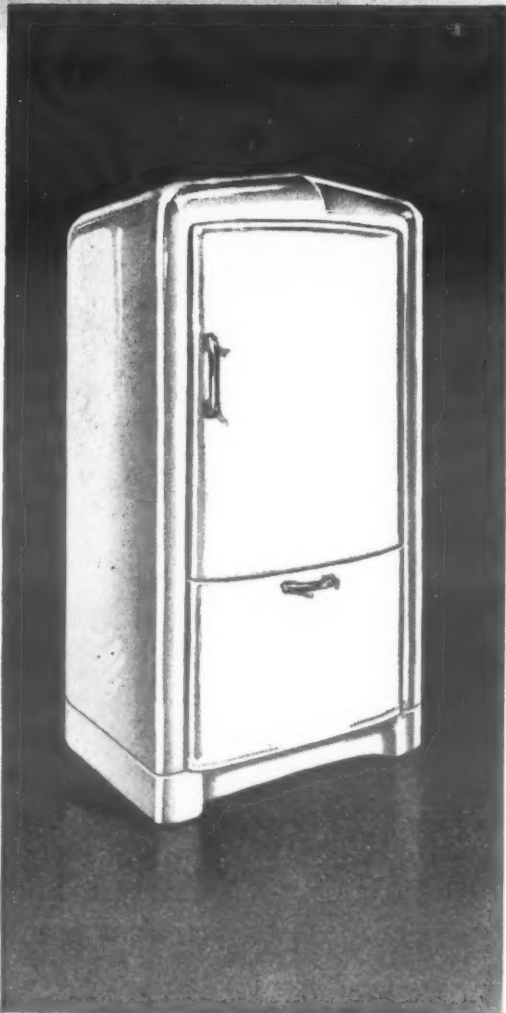
IS *a sensation that becomes  
an enduring memory...*

## SYNTEX WHITE SYNTHETIC ENAMEL

*is a finish that endures as a pleasant reminder  
of a purchase wisely made.*

More than 1,500,000 refrigerators finished in Jones-Dabney Syntex White bring to their owners daily the comforting assurance of having bought wisely and well.

In many large industrial operations Syntex White is the standard finish, in others it is the safe alternate.



## JONES-DABNEY CO. INCORPORATED

SCIENTIFICALLY CONTROLLED INDUSTRIAL FINISHES

Factories at Detroit, Mich., Louisville, Ky., Malden, Mass.



## Personnel and Office Changes

### Joins Savage Arms



A. N. KELLY

### Kelly To Represent Savage In New England Area

UTICA, N. Y.—A. N. Kelly has been named representative of the refrigeration division of Savage Arms Co. in the New England and New York territory.

For the past 10 years, Mr. Kelly represented Sheip & Vandegrift, Philadelphia, manufacturer of parts and accessories for ice cream cabinets, and prior to that was in the service department of Abbotts Dairies, Philadelphia.

### Hambleton Heads Crosley Foreign Division

CINCINNATI—Roscoe L. Hambleton has been named manager of the foreign division of Crosley Corp. He comes to Crosley from the overseas division of General Motors.

His export activities extend over many years of residence abroad, principally in the Far East, where he formerly operated his own engineering and distributing organization, representing such well-known companies as Frigidaire, Atlas-Imperial Diesel Engine Co., Kermath Mfg. Co., Evinrude Motor Co., Hall-Scott Motor Co., Fageol Motor Co., Bristol Co., Boeing Airplane Co., and Weber Showcase & Fixture Co.

Mr. Hambleton built the first American Diesel-engined ship to operate the difficult gorges of the Upper Yangtze, introduced speed boat racing in China, and was active in aviation development there.

He has covered both Central and South America, and traveled extensively in the Orient from Japan to Java. After the disturbances in China he returned to the United States, and spent a short time with Caterpillar Tractor Co. before joining General Motors.

### Reinhart Named Bendix St. Louis Manager

ST. LOUIS—W. S. Reinhart has been appointed St. Louis district manager for Bendix Home Appliances, Inc., succeeding C. H. Hunter. Mr. Reinhart has been with the Bendix organization since 1937 and was previously district manager at Boston.

R. I. Eshman of Detroit has been named to assist Mr. Reinhart.

### Stedman Heads Sales For Bastian-Blessing Division

CHICAGO—Gerald E. Stedman has been appointed sales manager of the Rego division of Bastian-Blessing Co., manufacturer of soda fountain, gas welding, cutting, and liquefied petroleum gas equipment.

Mr. Stedman formerly was vice president in charge of market planning for Cramer-Krasselt Co., Milwaukee, when that company handled the Norge refrigerator and major appliance advertising account, in which position he became well known in the appliance merchandising and retail sales training fields.

### Mayflower Air Conditioners New Name of St. Paul Firm

ST. PAUL—Name of Mayflower-Lewis Corp., manufacturer of winter air conditioning equipment, has been changed to Mayflower Air Conditioners, Inc. Headquarters are at Newcomb & East Seventh St. here.

### Spartan Headquarters Moved To Norwood, Ohio

NORWOOD, Ohio—Headquarters of Spartan Electric Mfg. Corp., manufacturer of Spartan ultra-violet lamps, and of Science Laboratories, Inc., an affiliated research and marketing organization, have been moved to Norwood from Cincinnati. William H. Albers is president.

### Brazilian Firm Now A 'Limited' Company

RIO DE JANEIRO, Brazil—Emilio Staub & Cia. has announced that it has changed its type of business to that of a limited company, and that it is now correctly addressed as Emilio Staub & Cia. Ltda.

The same partners, Emilio Staub and Charles James Hams, still operate the company, all details of which remain the same. Head office of the firm is located at Rua Evaristo da Veiga 128, 4° andar, Rio de Janeiro, with branches in Sao Paulo and Porto Alegre, Rio Grande do Sul.

### Newark Redisco Office In New Location

NEWARK, N. J.—Local headquarters of Refrigeration Discount Corp., Nash-Kelvinator financing agency, have been moved to a new location at 816 Military Park building, 60 Park Place.

### Cutler-Hammer Enlarges Minneapolis Offices

MINNEAPOLIS—Office and warehouse of Cutler-Hammer, Inc. has been moved to larger quarters at 532 S. 7th St. Horace H. Ratcliff, Clyde A. Russ, and Donald Ladwig represent the company here.

### Shapiro Adds Estate Line

NEWBURGH, N. Y.—Shapiro Sporting Goods Co., appliance distributor here, has been appointed distributor for Estate gas and electric ranges, gas heaters, and oil burners.

### Servel Transfers Boyle To New York Office

NEW YORK CITY—H. S. Boyle, formerly sales promotion manager for Servel, Inc. with headquarters in Evansville, Ind., has been transferred to this territory.

### Carter In Midwest For Kelvinator Ice Cream Units

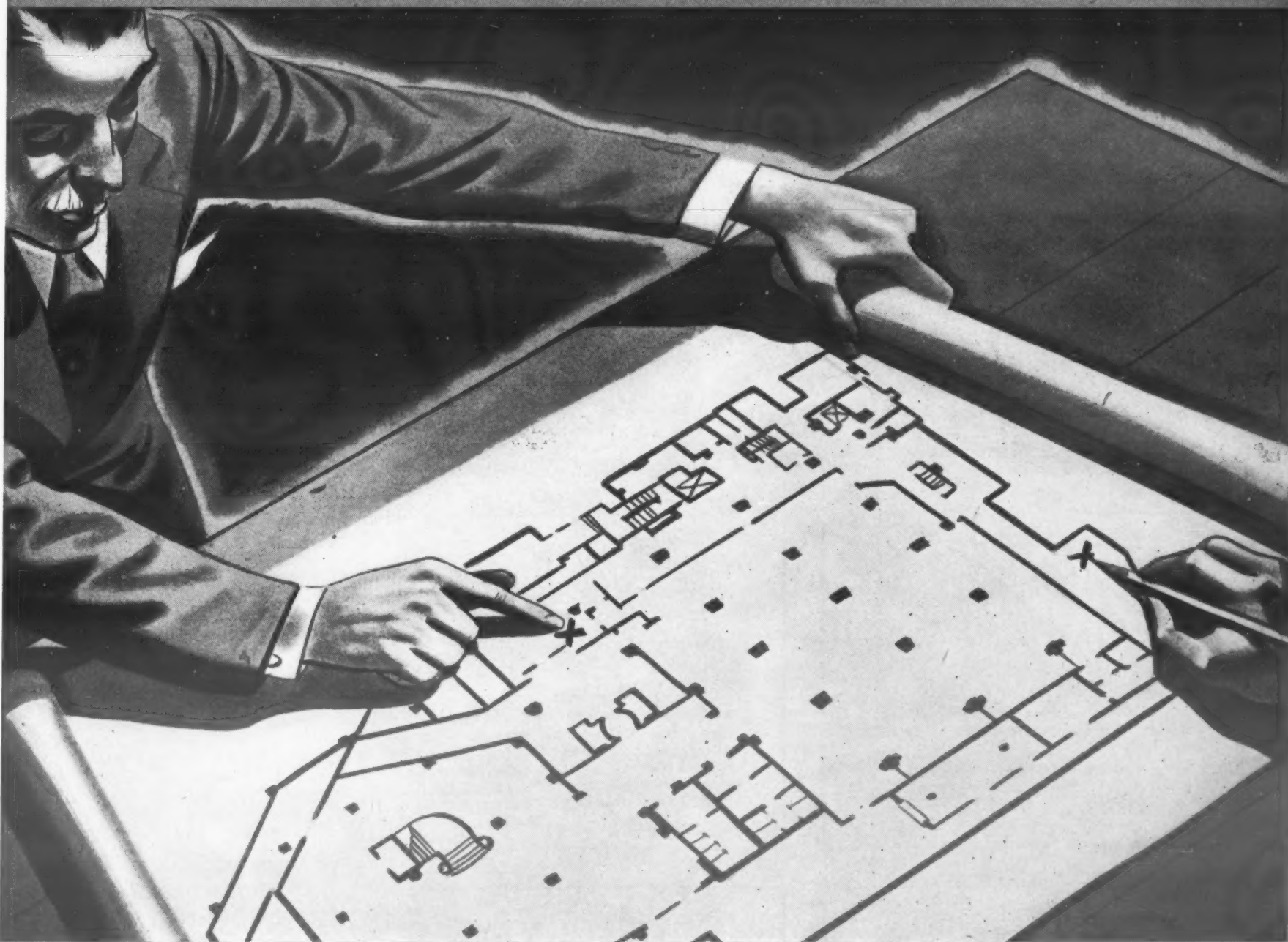
DETROIT—Don H. Carter has been appointed midwest territorial manager for the ice cream division of Nash-Kelvinator Corp.

In his new post, Mr. Carter is in charge of ice cream cabinet sales in an area which includes Michigan, Indiana, and western Kentucky. He has been with Kelvinator for the past 11 years.

### New Furniture & Appliance Organization In Columbus

COLUMBUS, Ohio—The Friendly Furniture Stores, Inc. has been formed by a business group headed by R. E. Williams, which has taken over the two appliance and furniture stores formerly operated by Pat Crowe at 463 N. High St. and 1002 Parsons Ave. Extensive additions have been made to the stocks, including a complete line of Crosley appliances.

*"Notice how **FREON** refrigerants give us more flexibility in locating the air conditioning plant!"*



"FREON" refrigerants in the air conditioning system permit wide leeway in locating the cooling plant, thus resulting in more efficient design and use of space.

Equipment using "Freon" refrigerants can be placed right in the space to be cooled, or close to material to receive the refrigerating effect, because of the harmlessness of the refrigerant and the quietness of operation. The system is compact, occupying comparatively little floor space and low head room. The light weight of the equipment permits roof installations where they are desirable.

All these are factors of great impor-

tance to architects, building owners and operators, since it is their problem to make the most efficient use possible of building space.

Equipment using "Freon" refrigerants has low initial cost and exceptionally low operating cost. Since these refrigerants do not corrode any of the metals used in air conditioning, they permit use of materials which provide maximum heat transfer.

"Freon" refrigerants are used almost exclusively in new air conditioning installations because of their unique safety. They meet all the safety specifications set by the Underwriters' Laboratories of Chicago. Use of "Freon" refrigerants

avoids any possibility of penalty to your client in insurance rates, and promotes safety of life and property.



# FREON

REG. U. S. PAT. OFF.

*safe refrigerants*

"Freon" is Kinetic's registered trade mark for its fluorine refrigerants.

KINETIC CHEMICALS, INC., TENTH & MARKET STREETS, WILMINGTON, DELAWARE



## A Good Beginning . . .



Here's part of the third carload of 1940 Kelvinator refrigerators sold this year by J & R Motor Supply Co., Dallas, which took the line on in February. First carload was sold before it could be distributed among the company's three stores.

## 3 Carloads In 2 Months Just A Start For Dallas Kelvinator Dealership

DALLAS, Tex.—When a dealership that's brand-new in the appliance business sells three carloads of electric refrigerators within a little more than two months after it receives its franchise, it's a pretty safe bet that back of the record is a story of sound merchandising practices.

That's the mark hung up this spring by J & R Motor Supply Co., operator of three stores here, and exclusive Kelvinator dealership.

When Boas Weisman, manager of one of the company's stores, sug-

gested that a line of electric refrigerators be added to the company's products, a number of eyebrows were lifted in questioning. But after the first carload of Kelvinators had been sold before they could be apportioned among the three stores, even the most hardened skeptics had to admit Mr. Weisman had a good idea.

That was in February—and within a little more than two months, two more carloads of refrigerators went the way of the first—into customers' kitchens.

To make the record more unusual,

only one trade-in was involved; and 40 of the sales were made in Dallas itself, the rest in suburban areas in which two of the company's stores are located.

"Persistent effort" is Mr. Weisman's explanation of the sales record. Every "suspect" was tracked down, and the sales staff was encouraged to study the units, and learn in detail all their possible selling points. Consistent window displays also have kept the refrigerators in the public eye, and a corner niche just inside the door has brought the units to the attention of every person who enters or leaves either of the stores.

### WATCH THE FARM MARKET

Close watch also has been kept on rural electrification developments in and around Dallas, with good results. "We just had to make ourselves 'Kelvinator-minded,'" says Mr. Weisman, "and that's about all there is to it."

While there have been a good percentage of cash sales, most sales have been made on the Kelvinator "\$6 down and \$6 a month" for 6-cu. ft. units, and "\$8 down and \$8 a month" on the 8-cu. ft. models, Mr. Weisman reports. "We won't even talk trade-in with a customer unless the refrigerator he wants to buy costs \$169 or more," he says.

During its first two months in business, the company got into one cooking school, in Irving, Tex. It had the only refrigerator at the school, Mr. Weisman reports, and aroused considerable interest. The dealership is making use of factory promotional materials, and will have the refrigerators listed in its next motor supplies catalog.

## Using Common 'Cents' In Selling

### Making Little Prices Out of Big Ones Helps Dealer Sell Carload of Refrigerators In Sub-Zero Weather

BUFFALO—By the simple expedient of "making little prices out of big ones"—putting the decimal points in front of, rather than in back of, his advertised payment terms—Frank L. Mayo, proprietor of Mayo Refrigeration Co., Inc., boosted his 1940 spring refrigerator sales by 500% and knocked the pre-season selling drag for a loop.

Mr. Mayo's method for corraling early season sales was simply to order a carload of refrigerators, and advertise them for sale on terms of 45 cents down and 15 cents a day on the balance. Two full-page newspaper insertions, in addition to a series of smaller advertisements, were used to drive home his "nickel-and-dime" sales plan.

### GONE IN 26 DAYS

He supplemented this advertising with a huge banner across the front of his store at 216 Grant St.—and in 26 days, the entire carload of 50 refrigerators had been sold—this in weather when many western New York dealers were wondering where their next sale was coming from . . . with the temperature near zero and prospects not fully recovered from their Christmas spending sprees.

Mr. Mayo's campaign, in addition to making a clean sweep of the 50 refrigerators, gave him the best early season sales record in the six years of his business.

"The 45 cents plan did the trick," Mr. Mayo says. "Many passersby during our campaign turned back for a second look at the huge sign on our store-front, and smilingly decided to come in. Their first question, in substance, usually was:

"Do you mean I can take a refrigerator home for a 45-cent down payment?" That placed them in rather fine humor, and tended to make the sale easier. To top it off, our 15-cents-per-day plan proved a fine sales clincher.

### REPEAT BUSINESS

"This 45-cent idea worked wonders for us in more ways than one. First, it brought in the customers for the original sale; then it kept bringing them in every week to make their payments. Their weekly appearances in the store have helped to sell many smaller items.

"In several cases, electric ranges and washing machines have been sold to these original 'carload sale' customers. In some instances, rather than lose a sale, we helped them along with a pledge that they wouldn't have to start paying on the new purchase until the refrigerator they had bought previously was paid out."

Success of this merchandising idea has led Mr. Mayo to retain it even until today. Recently it also has been put into effect on sales of electric ranges, washers, dryers, ironers, and other appliances, boosting the volume of business in general during the first week by 25%.

Mr. Mayo, in the six years he has been selling refrigerators, has specialized on "bring 'em in" stunts. At one time he donated a \$200

refrigerator for a church lawn fete contest. With it he offered 30 certificates, each worth \$25 toward a purchase on any refrigerator in his store, as runner-up prizes. The church circulated 20,000 tickets, each bearing the donor's name—a fine bit of advertising in itself.

Shortly after the lawn fete, 10 disappointed housewives came in—disappointed because they had high hopes of winning the refrigerator. They had but one consolation: Each had been awarded one of Mayo's \$25 certificates, and they wanted to turn them in on refrigerators just like the one they had come so close to winning.

Frank Mayo, together with his brother Joseph, has been in the electrical appliance field 21 years all told, starting in 1919 as an electrical

## Man At Work



Frank L. Mayo demonstrates one of Stewart-Warner's Dual-Temp models to a prospective customer.

service shop. Later most of their work was done under service contracts for leading refrigerator manufacturers.

They continued to maintain their service shop together for 15 years. Now that part of the business is being handled by Joseph Mayo.

The Mayo files contain well over 25,000 names and addresses of customers whom they have serviced. Because the service end of the Mayo business keeps it in constant touch with refrigerator owners, the company has managed to take trade-ins on 30% of its sales, the highest percentage of any electrical dealer in Buffalo, it is believed.

Joseph Mayo repairs people's refrigerators or advises them to get new ones, naturally tipping them off to the attractive offers the retail part of the Mayo business has to offer.

## 'Family Nights' Build Appliance Business

DENVER—Every Thursday night is "Family Night" at Joslin's Dry Goods Co. here, and sales of appliances have been increased by keeping the store open until 9 p.m. on these nights, for the convenience of working people who do not have an opportunity to shop during regular hours.

Believing that the average housewife wants friend husband on hand when buying an appliance, the store hit upon the "family night" idea to allow husband and wife to do their appliance shopping together.

By staggering the hours of the regular day crew, the appliance department is able to carry out this plan without additional labor overhead. Since, except at sale times, Thursday is normally one of the lighter days of the week, maximum crews are not required during all the regular daytime hours.

To build early evening traffic and thus get the bulk of the business out of the way before it is necessary to prepare for 9 o'clock closing, the appliance department each week runs a series of "7 o'clock specials." There are usually about a half dozen items on this list. These specials are featured in regular newspaper advertising and on the firm's radio program.

"What's that? A green refrigerator?"



1 I winced. All through my talk this nice old lady got only one word in every three. "No—not green!" I shouted. "I said 'DULUX' is easy to CLEAN!" She got that point.



2 "That's fine, young man," she said. "I like things that are easy to clean." Next, I roared into her microphone how DULUX keeps its whiteness, resists accidental bumps, grease and food stains and yellowing. She kept nodding approvingly.



3 But just when I thought I'd finally tuned to the right wave-length, she popped again! "Alter? Alter what?" she asked. "No, not 'alter,'" I boomed back. "I said 'Gibraltar!' DULUX keeps its whiteness because it's a hard, tough finish. IT WEARS LIKE GIBRALTAR!"



4 And when I showed her the DuPont DULUX seal, she didn't need her trumpet any more. She just pointed to the seal and said in a firm, convinced tone: "Oh, yes . . . 'Made by Du Pont.' They always make the best things. Now I know I'm getting my money's worth!"



5 Feature the advantages of DULUX! It helps you sell refrigerators faster . . . because it's the finish women want. That's why more than 75% of all refrigerator manufacturers use DULUX. E. I. du Pont de Nemours & Co. (Inc.), Finishes Div., Wilmington, Del.



# DULUX

THE MODERN FINISH FOR MODERN LIVING...It saves work



A simple, efficient tool for hard pulling jobs such as flywheels, fans and pulleys—universal for all make refrigerators. Rotating arms grip in any position—internal or external pulley—odd and even spoked wheels. Hex head power screw has narrow band to facilitate hand turning. Made of special steel, hardened and tempered. Fully guaranteed. Sold by mill supply and refrigeration jobbers.

J. H. WILLIAMS & CO.  
225 Lafayette St., New York, N. Y.





## What's In A Name? Sales, and Plenty of Them

### Lincoln, Neb. Refrigerator Dealer Covers Floor Model With Customers' Names

LINCOLN, Neb.—An adaptation of the "use the user" method of selling has been found an effective means of increasing interest in electric refrigeration at Sears, Roebuck & Co.'s local store, reports H. A. Evans, district manager for refrigerators at the store.

Mr. Evans' method puts users of new Coldspot units "to work" right inside the basement refrigerator department. Demonstrator model in this department has been covered with names and addresses of persons in Lincoln and vicinity who have purchased units within the past year. Even the inside of the door is filled with names.

The "testimonial" model is placed on a raised platform near the elevators, where everyone entering the basement can see it.

"It's hard to say just how many extra sales this stunt has made," said Mr. Evans, "but it has helped materially. It's the most successful selling stunt we've ever used, time and cost considered. Nearly everyone who sees the refrigerator stops to read the names, to see if there's anyone there they know. I know of a number of sales that have developed directly from this display."

A placard atop the demonstrator model invites prospects to "ask your neighbor" about the refrigerator, and to purchase one on "our easy payment plan." On the wall beside the refrigerator is a map of Lincoln and vicinity, with vari-colored pins denoting Coldspot users—refrigerator, washer, and radio.

Cost of painting the names on the refrigerator was \$15, Mr. Evans said, and it will cost several dollars more to refinish the unit when the selling stunt is discontinued. The refrigerator then will be sold as a used model. He thinks the stunt is paying more, per dollar invested, than any promotional idea he has ever seen.

### Topsy-Turvy Unit Proves Potent Sales Aid For E. St. Louis Store

EAST ST. LOUIS, Ill.—An "upside down" window display built around the new 1940 Frigidaire has been creating sales and interest for East Side Refrigeration Co. here.

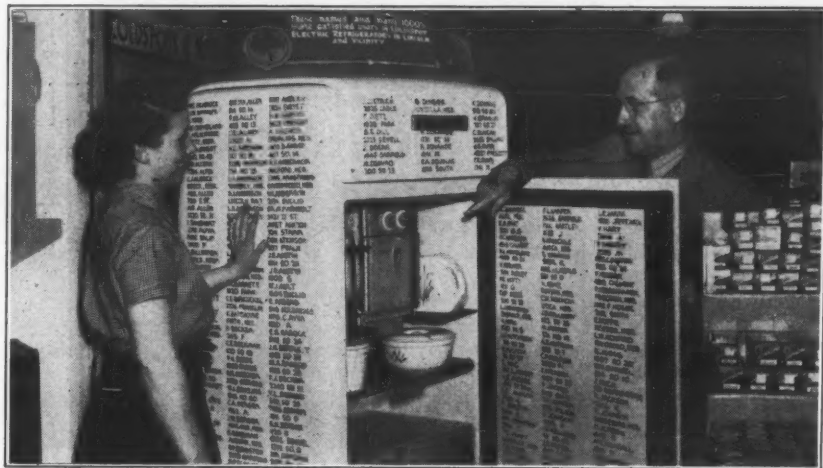
In the center of the main store window, Mark Wallace of the firm placed a standard model refrigerator, braced on heavy 2 x 2 supports, upside down, located so as to allow room to open up the door and show the interior. Motor platform and interior shelving were tied down with heavy twine to prevent their falling down, otherwise no changes were made. The box is in regular operation, and contains fruits, vegetables, and meats—set on the bottoms of shelves rather than on top.

The display has been an effective testimonial to the construction of new refrigerators, the firm reports. Service men have been calling attention of their customers to the display, pointing out that handling does not injure the refrigerator, and floor traffic has been consistently heavier.

### Advertising 'Split Up' For Wis. Store's Sale

APPLETON, Wis.—Wilson's, operating appliance stores here in Neenah, Oshkosh, and Fond du Lac, utilized heavy newspaper advertising in local dailies to promote its fifty-second annual sale, May 24 to June 1.

Rather than utilizing large single advertisements, the firm ran seven smaller advertisements on as many different pages in May 23 editions. Single advertisements promoted refrigerators, radios, ranges, oil and coal burners, vacuum cleaners, washers, and carried arrows captioned, "Turn to the Next Page." All advertisements appeared on consecutive pages.



H. A. Evans (right) points out to a prospective customer the names of many others who have bought a model like this.

### Buying a Refrigerator Is a Gamble—This Way!

ATLANTA—When the customer's choice of a refrigerator hinges simply upon the flip of a coin, it's a pretty safe bet that a good job of selling already has been done . . . but there's still a tough row ahead. This was the situation in which H. R. Chappell, salesman for Georgia Power Co., found himself.

His prospects, a woman and her daughter, were undecided whether

to buy a 5 or 6-cu. ft. refrigerator—and unable to agree, started to walk out without signing an order. Mr. Chappell had to do something.

"You've got to have a refrigerator," he told them. "It's just a matter of choice. Let's flip a coin to decide which you'll take." That suited them—and they walked out a few moments later—but Mr. Chappell had an order for the 6-foot model.

### Used Refrigerator Sold Four Times To Push Sales of New Units

ALBANY, N. Y.—Selling four new refrigerators with the use of the same reconditioned refrigerator is the record hung up by Griswold & Jacobs, Westinghouse dealer here.

When the firm takes in a used refrigerator, it is reconditioned and sold with a one-year guarantee. Within that time, the full purchase price or the amount paid on the new refrigerator can be applied on the purchase of a new refrigerator. Terms on used models are \$5 down, and \$3.28 a month on a year's contract.

A new refrigerator can be bought with a slightly larger down payment and payments of \$4.04 a month on a 30-month contract.

After selling the reconditioned refrigerator, store salesmen keep after the customer as a prospect for a new refrigerator, stressing the slight difference in monthly payments, plus the longer guarantee period on the new model.

So successful was the method that last year the same used refrigerator went into four different homes, only to be replaced by a new refrigerator within a short time, according to H. Jacobs, partner in the firm.

### Working Washer Display Boosts Sales 25%

SEATTLE, Wash.—A working display of electric washers under actual home laundry conditions has brought a 25% increase in sales to the Ben Franklin Electric Store.

Location chosen for the demonstration is alongside the regular washer display, but to one side, and made more secluded by the addition of a narrow false ceiling that limits the view to the equipment shown. Two sets of laundry tubs are installed, and each features a washer of different price range, with a spotlight installed above each machine to direct attention to the demonstration.

With a set-up of this sort, all operating features of the washer can be shown, and mechanical details explained for the benefit of husbands, if desired. Sales points can be demonstrated, rather than just mentioned, and if the prospect wishes, she can run the wash through herself, comparing the new machine's action with that of the model she already owns.

Most important, the demonstration arrangement makes it possible for the prospect to visualize the washer in use in her own laundry, something rather difficult to do when it is shown with a number of other models on the display floor.

# MILLS NEW Air Perfectioner

Your opportunity to tie in a precision-built  
"PACKAGE" COOLING UNIT with your  
present Commercial Refrigeration Business

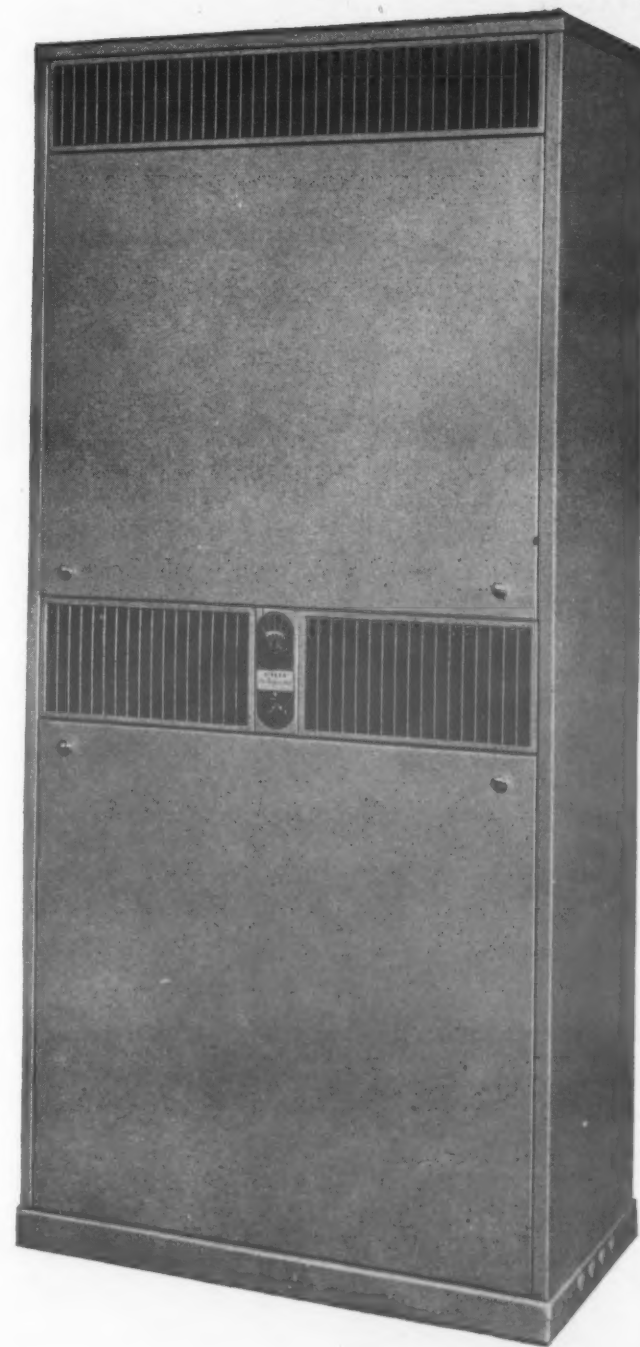
Here is an eye-catching self-contained unit that cools, dehumidifies, filters, circulates and, where desirable, ventilates (with simple duct connections). Provision for heating and humidification if desired, as optional equipment.

Mills, a name already renowned in the refrigeration world, because of the famed Mills Compressors, offers to the Commercial Refrigeration Distributor and dealer, two of the most modern and highly developed unit air conditioners on the market today. These new units, in 3- and 5-ton capacities, are distinguished by many advanced features and embody the engineering and manufacturing knowledge gained from years of experience. Their dependability is worth more to the dealer than any other feature we could point out—the direct result of precision manufacture and sound engineering design at the most modern and complete compressor plant in the world — MILLS.

### Here Are the Facts at a Glance:—

	AP-300	AP-500
Coil Depth .....	4 row	5 row
MILLS Slow-speed compressor HP.....	3	5
power input, KW.....	2.8	4.6
speed, RPM .....	675	575
Blower (multi-vane fan) HP.....	1/4	1/4
power input, KW.....	.31	.35
Net weight, lbs.....	974	1,240
Over-all dimensions:		
hgt., inches .....	90	90
wdth., inches .....	34 1/2	42 1/2
dpth., inches .....	21 1/2	21 1/2

Finish of both units in silver-bronze.



### DEALERS:

Write us today for full information and a copy of the Mills Survey Form for easy and accurate determination of proper unit size for any given area to be air conditioned.

**MILLS NOVELTY COMPANY**  
4100 Fullerton Avenue, Chicago, Illinois



## Gas Industry 'Looks Over the Fence'

### Finds Refrigeration Dealers Are Essential To Marketing Gas Air 'Conditioning'

By Charles R. Bellamy  
Chairman, A.G.A. Joint Committee on Summer Air Conditioning\*

We all know that vision and knowledge are required to plan intelligently for any business, and this is especially true of air conditioning, which presents a most interesting but very complicated problem. Enthusiasm is needed, but it should be enthusiasm based upon confidence in our own product, gas, and tempered with an understanding of the fundamentals of air conditioning.

There have been two developments in gas air conditioning of really tangible value. During the past two years the builders of gas fired dehumidifying equipment have simplified the design of their apparatus, while at the same time making substantial reductions in its sales price. As a result of these technical and commercial improvements, the markets for such equipment have been broadened.

Simultaneously with these improvements has come development of several gas fired absorption refrigeration systems for summer air conditioning. We now have three such refrigeration systems in a semi-commercial stage of development, and in addition there are two or three patented processes which appear to offer much promise.

Practically speaking, there are two main methods of refrigeration: 1. Compression; 2. Absorption. For the purposes of this paper we may call the compression system the electrical method, and the absorption system the gas method, although there are numerous exceptions to such a classification.

From the standpoint of actual air conditioning results, it makes little difference which refrigeration system is used, and the customer as a rule is not interested in the energy that motivates the system.

Much of the complaint against commercial air conditioning is undoubtedly due to the unsatisfactory experience that the public has had

in railroad trains and theaters. Some of the railroad installations were really discomfort jobs. The theater installations, while not as bad as those of our railroads, have seldom had the capacity and flexibility that are necessary to provide true air conditioning under all load conditions. Hence, many installations which were intended to provide comfort air conditioning could do this only under certain peak load conditions, and at other times they became discomfort jobs.

While present day knowledge of the effects of entrance and exit shocks may not be very comprehensive, we do know that the American Medical Association Journal has suggested that higher temperatures should be carried in summer air conditioning to prevent shock in hot weather, and that certain medical groups have recommended 10° F. as the maximum differential.

With these facts in mind, let us examine the possibilities of present gas equipment without bias.

#### I. DEHUMIDIFIERS

##### Application:

(a) For complete air conditioning where cold water is available. Depending upon water temperature and cost, re-evaporation cooling may or may not be required.

(b) For humidity control in split systems. Where great precision is required in the control of air moisture, such as in many industrial installations, separate dehumidifying equipment is often essential.

Thus we find that the gas fired dehumidification system can provide complete air conditioning under certain conditions, and has definite possibilities of application under all conditions.

#### II. ABSORPTION SYSTEMS

These systems have been designed to compete with the conventional motor-driven unit. Properly designed, with ample capacity, and provided with reheating facilities,

they can furnish complete air conditioning, or, like the electric unit, they can be combined with a dehumidifier to form a split system of highest merit.

It is apparent, I think, that dehumidifiers and absorption refrigeration systems are more supplemental than competitive. It follows, therefore, that the dehumidifier has a place in air conditioning regardless of how the air is cooled, whereas the value of the absorption refrigeration system depends largely upon how it compares in first cost, general operating cost, dependability, and performance results with the conventional electric system. To succeed, the absorption refrigeration system must either equal or better the compression system of refrigeration.

The big problem here appears to be which system of refrigeration, absorption or compression, is fundamentally the sounder, that is, which lends itself to the most efficient and economical development and which has the greater flexibility. It is impossible at this time to say which type of refrigeration will become most popular. In fact, the manufacturers of electric equipment appear concerned about this point.

It is interesting to compare the present operating characteristics of these two refrigeration systems. From actual coefficient of performance ratios, 3.4/.5, it is apparent that the absorption unit requires about seven times as much energy as the compression unit. In other words, to be competitive the energy for the absorption unit should cost not more than one seventh that for the compression unit, assuming all other conditions are equal.

On this basis the break-even value of gas for various prices of electricity is shown in the table below.

The fact that the refrigerating load of summer air conditioning presents a more or less serious problem to the electric industry, while it represents the ideal load to the gas industry, is something to ponder over. A great deal has been said about the undesirability of the air conditioning load to the electric utility, and while there is much truth in all this, I think it will be some time before the electric industry enthusiastically promotes gas air conditioning. There is, however,

reason to believe that the electric utilities will not object as strenuously to the development of the absorption refrigeration system, which is really a chemical system, as they would to the promotion of a competitive prime mover.

#### GAS VS. ELECTRICITY

To the electric industry, the growth of air conditioning is bound to bring new business, regardless of whether the basic units are electric or gas, since the power for fans, pumps, and other auxiliaries will be electric, and this is the steady, desirable load.

To the gas industry, on the other hand, the growth of air conditioning is of interest only as gas is employed for the dehumidification and refrigeration effects. Hence, if the so-called electric units should prevail, only one of our utilities would benefit, and that to a questionable degree, whereas if the gas fired systems come out on top both the gas and electric utilities will benefit almost equally. The determining factor, of course, will not be how these systems affect the utility business but rather how they benefit the public.

Summer air conditioning is not a product, like the automobile or radio or refrigerator, which can be completely assembled at a factory and sold over the counter directly to the customer as a finished article with guaranteed performance. Instead, it is a cooling and ventilating system that has to be designed, engineered, and fitted to the building or space, which it is to serve.

The cooling or refrigerating unit, likewise the dehumidifying unit, may be standardized products, but as such they represent only from 30 to 40% of the total cost of the complete installation, and the success and economy of air conditioning are dependent upon the correlation of numerous factors as well as upon the individual efficiency of important units in the system.

Because of this very fact air conditioning systems are not sold directly by the manufacturers or the utilities, but by independent local engineering contracting organizations. It is estimated that there are now over 1,500 such concerns scattered throughout our country, and that these are the organizations which not only aggressively sell air

conditioning, but which install and service the installations.

Today this large dealer organization is devoting its energies almost exclusively to the promotion of electrical equipment. If gas fired equipment is to succeed commercially, it is obvious that the manufacturers of such equipment and the gas utilities must cooperate with the dealer organizations that have been built up in our country to sell and install air conditioning, and to which the public now looks for advice.

In March of this year the Air Conditioning Committee presented a plan of action to the American Gas Association Committee on Association Activities which proposed that from 15 to 20 of the larger gas companies employ capable air conditioning engineers to study this problem.

Under this plan, these air conditioning engineers are to report directly to the top operating executives, rather than to any department head. It would be the duty of these men to spend sufficient time at each of the factories where gas equipment is manufactured to thoroughly understand the construction and operation of each piece of equipment.

A natural question to ask at this time is: Where are we to get the experienced and competent sales engineers for air conditioning? The answer, I believe, is: From the electric utilities and the manufacturers of equipment. Frankly, there is no better training for the work we have in mind than that which many engineers have received in the established air conditioning industry.

#### THREE NEW JOBS

Today our industry is being challenged to action by the developments that are taking place in the summer air conditioning business. We are being challenged to undertake three big, new jobs, jobs that are altogether too big for one or two companies to cope with effectively and which call for the strength of a united, determined industry. These three jobs are:

1. To gather information and obtain experience along a broad front so that our starting plan will evolve under an intelligent guidance into a comprehensive and aggressive course of action.
2. To encourage and support the manufacturers of gas fired summer air conditioning equipment.
3. To initiate a movement that will arouse the interest, command the respect, and secure the wholehearted cooperation of the engineering dealer organizations that constitute an essential link in the summer air conditioning business.

#### Break-Even Value For Gas For Various Electric Rates

Average Price of Electricity Per Kwh.	Equivalent Value of Gas Per Therm	Equivalent Value of Manufactured Gas Per MCF (550 B.t.u.)	Equivalent Value of Natural Gas Per MCF (1,100 B.t.u.)
1.50¢	6.30¢	34.6¢	\$0.69
1.75	7.35	40.4	0.80
2.00	8.40	46.2	0.92
2.25	9.45	52.0	1.04
2.50	10.50	57.8	1.15

## To Help You Sell More Packaged Units CURTIS ADVERTISES IN TIME!

Illustrated below are three of a series of Curtis advertisements appearing in Time Magazine. Each advertisement tells the 750,000 readers of Time of the many advantages of the Curtis line of packaged air conditioners.

Be prepared to serve your customers and prospects who will see these ads — display Curtis units in your place of business. Write to Curtis today for full information on the complete Curtis line.

**Now - CURTIS**

**PACKAGED AIR CONDITIONING**

**LOW COST • Easily Financed**

OFFICES and all classes of retail establishments can now enjoy the advantages and comfort of modern, refrigerated air conditioning.

Curtis packaged air conditioners meet all requirements; need only water and electrical connections; eliminate costly installation charges; readily financed; easily transported if you move.

Curtis units cool, dehumidify, filter and circulate the air and are adaptable for heating. Sizes from 3 to 15 tons. Investigate this commercial unit for office and store cooling. The low cost will surprise you.

See your Curtis dealer or write for free bulletin.

**CURTIS**  
REFRIGERATING MACHINE COMPANY  
Division of Curtis Manufacturing Co.  
Established 1854  
1984 Kienlen Ave. St. Louis, Mo.

**You Can Cool YOUR Office**

**with CURTIS Packaged Air Conditioning!**

Five sizes, from 3 to 15 tons, provide complete comfort cooling for offices and retail establishments. Curtis units mechanically cool, dehumidify, circulate and filter the air and are adaptable for heating if desired.

You get these advantages with Curtis Units:

- Low first cost, minimum installation expense
- No disturbance to fixtures—easily moved
- Financing is easily arranged
- Thoroughly dependable, trouble-free performance
- Attractive, modern appearance

Add to the efficiency and comfort of your office this summer with Curtis Packaged Air Conditioning. Write today for free bulletin and information.

**CURTIS**  
REFRIGERATING MACHINE COMPANY  
Division of Curtis Manufacturing Co.  
Established 1854  
1984 Kienlen Ave. St. Louis, Mo.

**CURTIS**

**Packaged Air Conditioning**

*Selected by Another Famous Retailer!*

**PECK & PECK**

Curtis Packaged Air Conditioning will increase profits for you too, no matter what line of business you are in.

- No costly installation expense
- Readily financed
- Units easily moved
- 3 to 15 tons capacity
- Cools, dehumidifies, circulates and filters the air. Adaptable for heating, too.

See your Curtis dealer or write for free bulletin.

**CURTIS**  
REFRIGERATING MACHINE COMPANY  
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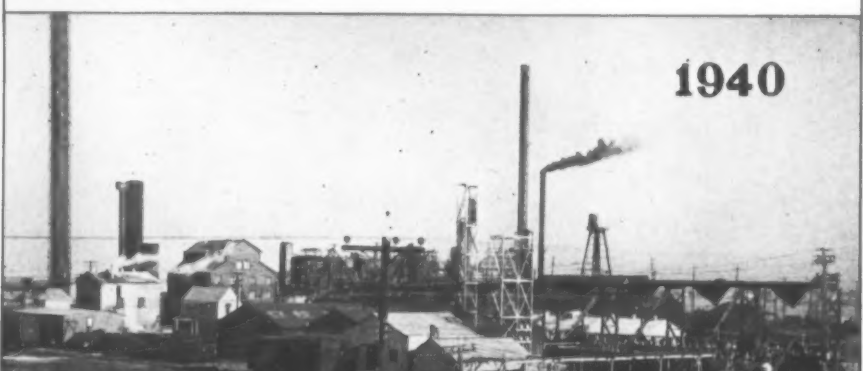


### CAPTAIN BILLY KNEW SULPHUR DIOXIDE BEFORE THE REFRIGERATION INDUSTRY WORE ROMPERS

"Capt. Billy" could tell you the whole dramatic story about SULPHUR DIOXIDE—how it grew from a lowly, smelter by-product to one of the industry's important refrigerants.

Capt. Billy has worked with the Virginia Smelting Company since 1899, the year of its founding.

It is men like him—men of experience and long service—who stand behind the quality of Virginia Refrigerants.



Buy your **KINETIC'S FREON-12** VIA **VIRGINIA**

A POPULAR LINE OF LOW-PRESSURE REFRIGERANTS

EXTRA DRY ESOTON • V-METAL • METHYLENE CHLORIDE

**VIRGINIA SMELTING COMPANY**

At tidewater, WEST NORFOLK, VIRGINIA



## Sidles Co. Starts Summer Campaign



R. L. Zak and W. F. Ardussi of the Airtemp organization with R. A. Rigby of the Omaha branch of the Sidles Co., Des Moines distributor, presented Airtemp's room cooler line to nearly 200 dealers during recent sales meetings in the two cities, staged in preparation for the summer selling season.

## Buffalo Council Launches National Program With Distribution of Promotional Booklets

BUFFALO—National distribution of promotional booklets to foster the idea of summer air conditioning will be part of the three-point summer program of the Air Conditioning Council of Western New York, reports Walter P. Davis, executive secretary of the Council. Other parts of the program will include "selling" the Buffalo public on the importance of inside temperatures in the consideration of air conditioning, and placing the Council's seal on all air conditioned buildings.

In past years the Western New York Council has distributed promotional booklets in the Buffalo area only, but this year a national distribution is being arranged through utility companies throughout the country, Mr. Davis said.

The booklets will show photographs of installations of air conditioning equipment in various types of businesses which might apply to any section of the country. This marks the first time such a national drive has been undertaken by a local air conditioning group.

Second phase of the program is concerned with selling the Buffalo public on the idea that the temperature they have to live in during the hot summer months is considerably higher than that reported by the weather bureau.

"For years we have been trying to acquaint the public with the idea that it is the inside temperature, and not the outside temperature, we are concerned with," Mr. Davis said. Buffalo, he pointed out, has always had a rather high relative humidity, and this makes it uncomfortable in the summer time, despite the fact that the thermometer reading is not particularly high, comparatively.

This year the Council plans to set up a temperature and relative humidity reading unit in the heart

of the downtown area, so the public can get a daily reading of the kind of atmosphere they are living in.

These special readings will be published daily in the local newspapers or announced over radio stations. Mr. Davis said this should cause local people to think more about the need for air conditioning, and have the desired effect on chain store executives in other cities, who believe there is no need for air conditioning in their Buffalo stores.

Final point in the Council's program is a promotion campaign in which the Council's official seal will be placed in a visible manner on every store and institution which is air conditioned.

To make the public more conscious of air conditioned buildings, the Council is sponsoring a contest. Prizes will be awarded to those making the most complete reports of the number of air conditioned buildings in the city, the names of the stores, and their business.

Commenting on the work of the Council during the past year, Mr. Davis said that the new policy of inviting prospective customers to Council meetings has worked out very satisfactorily, and probably will be pursued during the coming year. The Council now has 61 members.

The introduction of the room cooler in the home as a bedroom unit will be the entering wedge for the air conditioning dealer, Mr. Davis predicted, in outlining opportunities for the coming year.

## New F-M Compressor Gas-Engine Driven

CHICAGO—For installation in localities where natural gas is more economical than electric power, Fairbanks, Morse & Co. has developed an automatic gas-engine driven "Freon" condensing unit. The new unit, known as Model FNK-1000W, is suitable for use in both air conditioning and refrigeration applications.

The engine is fully water-jacketed the length of the bores, and exhaust valve seats are cooled by direct circulation of water from the header pipe. Full force-feed lubrication is accomplished by a positive gear pump.

Standard unit consists of a 6-cylinder "L-head" type engine mounted on a common base with an 8-cylinder "V" type compressor and a multiple shell and tube type condenser. Using a direct drive, through a centrifugal coupling, the entire assembly is mounted on a rubber cushion to reduce vibration.

Compressor heads are cooled by condenser water. The condenser, of the multiple shell and tube type, is arranged for counter-flow of refrigerant and water. Caps are removable to facilitate cleaning without discharging refrigerant from system.

At present, sizes from 7½ to 10 tons are available, and three larger capacities will follow later.

## New 3-Deck Pullmans To Have Anemostats

CHICAGO—Several air conditioned "sleeper coaches" are under construction by the Pullman Co. here. The new cars are divided in sections, each having three tiers of beds, where coach passengers will be provided with a low cost "berth."

Air conditioning equipment used in the new coaches will be Pullman standard. Each "section" is equipped with one side wall Anemostat.

## Keglers Enthusiastic Over Philadelphia's First Air Conditioned Bowling Alleys

PHILADELPHIA—First bowling alleys to be equipped with air conditioning in this area are three units of Jimmy Dykes Bowling Academies here. York air conditioning equipment was recently placed in service in the three alleys, and a fourth, to be opened in August, will also be air conditioned.

Max Sheinman, partner of Jimmy Dykes and manager of the chain,

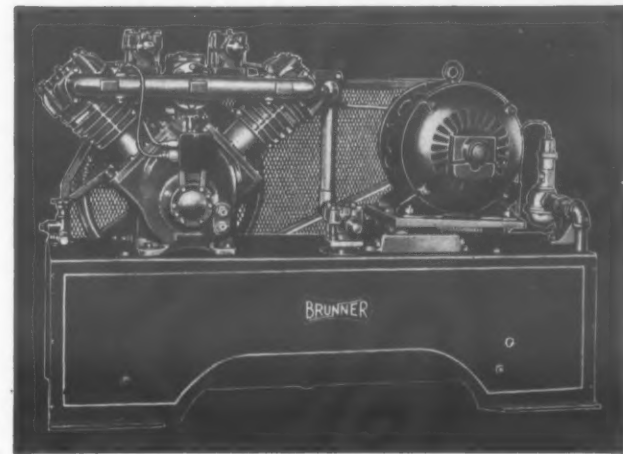
stated that he had been thinking about the improvement for a long time but asserted that "Jimmy Dykes was even more anxious to have air conditioning. He was persistent about it. So we have the systems operating now and the public is enthusiastic in its approval."

Billiard rooms and table tennis rooms operated with the bowling alleys are also air conditioned.



## The sweltering sun heads a profit parade—THANKS TO BRUNNER

The blistering rays of old Sol team up with modern-minded merchants—sending customers scurrying in for air-cooled comfort and for purchases. Restaurants, drug stores, beauty shops, theatres—in fact, any place where the public is served becomes a more popular rendezvous with Brunner refrigeration on the job. And Brunner refrigeration accomplishes the cooling task with marked economy! That's because of the smooth-running, dynamically balanced design of Brunner Condensing Units... their quality construction, with oversize parts at all important points of stress... their extreme precision of manufacture... Besides the larger air conditioning models, the Brunner line comprises air and water cooled condensing units for all types of commercial applications, from ¼ H. P. to 25 H. P. Catalog on request. Brunner Manufacturing Co., Utica, N. Y., U. S. A.



BRUNNER MODEL W-25,000

A super-built, 4 cylinder, 25 H. P. condensing unit... water cooled... for heavy duty installations.

# BRUNNER

## FOR YEARS THE SYMBOL OF QUALITY

**BLOWER WHEELS**

**"HAVE CLARGE MAKE THEM!"**

Every year we ship to builders of air conditioning units thousands upon thousands of Clarge Blower Wheels and Assemblies.

This smaller equipment is designed with the same skill characteristic of the larger Clarge apparatus—just as carefully fabricated and tested.

And we have sizes to meet ALL REQUIREMENTS—with slow speed operation insuring SILENT PERFORMANCE.

May we have your next inquiry?

**CLARGE FAN COMPANY**  
KALAMAZOO, MICHIGAN  
Sales Offices in All Principal Cities



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Trade Mark registered U. S. Patent Office;  
Established 1926 and registered as  
Electric Refrigeration News

F. M. COCKRELL, Founder

Published Every Wednesday by  
BUSINESS NEWS PUBLISHING CO.  
5229 Cass Ave., Detroit, Mich.  
Telephone Columbia 4242

Subscription Rates  
U. S. and Possessions, Canada, and all  
countries in the Pan-American Postal  
Union: \$4.00 per year; 2 years for \$7.00.  
All other foreign countries: \$6.00 per year.  
Single copy price, 20 cents. Ten or more  
copies, 15 cents each; 50 or more copies,  
10 cents each. Send remittance with order.

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VOL. 30, No. 7, SERIAL No. 586  
JUNE 12, 1940

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## Why Not Flexible Units For Air Conditioning?

THIS week the refrigeration industry's gold-braided engineers are meeting at Skytop, Pa., for their annual spring rendezvous with new problems, new applications, and new theories.

From such meetings in the past many new ideas have sprung. Also, an enormous amount of good work has been accomplished along the line of standardization of practices and establishment of standards.

Through the good offices of the A.S.R.E., and the good fellowship that arises among engineers from competing organizations when they get together at those meetings, the refrigeration industry has been saved uncounted sums of money, and had its progress speeded up tremendously.

## Make a Product Which Will Handle Variables

For this meeting we have a suggestion. It is:

Engineers should try to design unit air conditioners of flexible capacity.

As the NEWS has pointed out on many previous occasions, if air conditioning is ever to realize the roseate future so often pictured for it, if it is to become a major industry instead of a major disappointment, it will have to outgrow the contracting stage.

The factors of mass production and specialty selling must become vastly more important in the scheme of things, just as the factors of union labor (at inflated building-trades union labor prices) and wasteful on-the-spot estimating must become much, much less important.

## Mass Production Needed To Lower Prices, Raise Profits

These developments are necessary to bring prices down to a reasonable level, a level which will not cause the prospect to throw up his hands in resignation. They are also necessary if the business is to become profitable

for both manufacturer and distributor.

They are further necessary if standard prices are to be established and advertised—which will do more to eliminate confusion and distrust in the mind of the buyer than nearly any other move which could be made—and which will also make it possible for the distributor to back the product with the education, promotion, and salesmanship which it needs so badly.

## On Right Track With Window-Type Unit

In the case of the small window-type unit, the industry is on the right track. This type of unit, however, is quite limited in its application. For anything larger than a bedroom or a small office, contracting seems to enter the picture—even if the bigger 3 and 5-ton units are used. Why? Because rooms vary in cubic content, in occupancy, in sun load, and in many other variable factors.

"Air conditioning isn't like household refrigeration," the experts say. "You can turn out household refrigerators on an assembly line, because they're all alike, and all cool the same-sized space. But air conditioning is different."

## Other Products Meet Changing Conditions

Somehow, we don't believe a man like Henry Ford or C. F. Kettering would be much impressed by that argument. An automobile is not designed to travel only at one speed on a smooth concrete highway. Good ones will move along evenly at four miles per hour, or sprint up past a hundred. They will negotiate loose gravel, shallow streams, tough hills, rolling meadows, and Sunday traffic.

Often a tourist doesn't know too well what conditions his car will be forced to meet when he starts out on a long trip. But automotive engineers have foreseen all such conditions, and have turned out a product which will be adequate for practically any situation into which it may be steered.

Or, you can consider the radio. It can be tuned down to a mere whisper which even the old lady in the apartment up above can't hear, or it can be opened up enough to send an assembly hall full of high school jitterbugs into a frenzy of jive.

## Comfort Formula Varies According To Individual

An air conditioning unit with flexible volume, one which can be "tuned" to fit different types of rooms and conditions, and in particular, to fit different human wants and reactions (for the temperature and humidity which make one man comfortable may drive another man out) should not be beyond the bounds of engineering ingenuity.

Maybe that sounds like a pipe dream now. Possibly it is a pipe dream. But one of the social functions of the writer is to dream (page Jules Verne), just as one of the social functions of the engineer is to invent.

It's a cinch that air conditioning is hungry for more engineering. It's a field, an opportunity, that no refrigeration engineer should overlook.

## They'll Do It Every Time . . . By Jimmie Hatlo



## Executives Express Admiration For F. M. Cockrell

### William Robert Wilson

6460 Kercheval Ave.  
Detroit, Mich.

Dear Mr. Taubeneck:

While the course of business has not brought us together in the last few years as it did in the Copeland days, I heard of the passing of Mr. F. M. Cockrell while I was out of the city the other day with both shock and distress. It is hard to realize that a man of his vital qualities has left us.

I shall always remember the constructive part he played in the early days of the electric refrigeration industry with high respect and the coordinating ability he quietly manifested because of his faculty for gaining the confidence and friendship of all of us in those earlier days. The loss of his uniformly helpful attitude on any subject of industry interest will be mourned, I am sure, by all those whom his business served.

May I by this means register with you and his other associates my respect for Mr. Cockrell and the splendid work he has done, and join with his many other friends in condolence to you over his loss.

WILLIAM ROBERT WILSON

### J. S. Forbes

Superior Valve & Fittings Co.  
1509 W. Liberty Ave., Pittsburgh, Pa.  
My Dear George:

Late arrival of the May 29 issue brings the shocking news of the untimely death of your friend and guide, F. M. Cockrell. I never did get to know Mr. Cockrell as much as I would have liked, because all of those whose privilege it was to know him well spoke so highly of him as to make me feel that I missed a real opportunity to know a man, a leader, and an example.

To you who will "carry on," I extend my most sincere best wishes.

J. S. FORBES, Pres.

### Thomas Evans

Merchant & Evans Co.  
Importers and Distributors  
Sheet Metals, Brass and Copper  
In All Forms  
2035 Washington Ave.  
Philadelphia, Pa.

Dear Mr. Taubeneck:

I was shocked and deeply distressed by the untimely death of Mr. Cockrell. I thought very highly of him and we were good friends. May I ask you to convey to Mrs. Cockrell my great sympathy?

From the standpoint of the refrigeration industry and all of its ramifications I consider that we have lost one of our most constructive pioneers and workers. During the years that followed 1931 nearly every industry of substantial size and volume had declined in activity, in some cases disastrously. Not so mechanical refrigeration.

The industry had emerged from adolescence into a fine striding, progressive business, contributing continuously in greater degree to the comfort and health of the people at

large until its products in 1937 were sold to the consuming public at home and abroad for an excess of a total of 750 million dollars, or well over 1% of the national income of the U. S.

In writing this astounding history of the growth of a great industry, Mr. Cockrell was an important contributor in welding and consolidating the various elements into a distinct and individual interest, and, at the time of his death, he was still energetically pounding away to bring still further cohesion. It seems, therefore, befitting for me, who has seen the development that has taken place and Mr. Cockrell's part in it, to express my feeling of the loss the industry has suffered through his death.

AIR CONDITIONING & REFRIGERATION NEWS was actively followed by refrigeration people everywhere. I know that in two trips through Europe in the last few years I found frequent evidence of this fact. I think, no doubt, that on your world-wide trip you found ample corroboration of this impression of mine.

As Mr. Cockrell practically introduced me into refrigeration group activity and since I have been in touch with him on frequent occasions during the five years I have served as Chairman of the Refrigeration Division of Nema, comprising 95% of mechanical refrigeration production, I feel as though I were somewhat qualified to write you and your staff as I have done. Wishing you and the paper and your company great success and with kind personal regards.

THOMAS EVANS

### S. E. Lauer

Air Conditioning Manufacturers' Association  
Southern Bldg., Washington, D. C.  
Dear Mr. Taubeneck:

The death of Mr. F. M. Cockrell is a cause for regret and sorrow to his many friends in the air conditioning industry. Our sorrow is in the loss of both a personal friend and a kindly counselor. The air conditioning industry will miss Mr. Cockrell's clarity of viewpoint and his constructive help.

On behalf of the members of the Air Conditioning Manufacturers' Association, I send to you and your associates, and to Mr. Cockrell's family, our deep sympathy.

S. E. LAUER, Pres.

### Mason Britton

McGraw-Hill Publishing Co., Inc.  
330 W. 42nd St., New York, N. Y.  
Dear Mr. Taubeneck:

I was shocked this morning to hear of the death of our good friend, Frank Cockrell.

We always looked on Frank as "one of our boys," and his long association with us endeared him to us all. I had the pleasure of visiting with him down at Hot Springs at the ABP meeting, and he impressed me again as a fine publisher—one with ideas and ideals.

I want to extend to his associates on your paper my deepest sympathy.

MASON BRITTON

### H. E. Young

Northern States Power Co.  
Minneapolis, Minn.

Dear Mr. Taubeneck:

Permit me to express to you and your staff my sincere sympathy for the passing of Mr. Cockrell.

I realize that nothing one can say can contribute much to fill the void created by such an unfortunate loss, but am sure you realize the grief which everyone connected with this business shares with you.

I have been personally acquainted with Mr. Cockrell for many years, and have learned to admire his ability and sterling character, as has everyone else who has come in contact with him.

Please also extend my sympathy to the members of his family.

H. E. YOUNG

### W. S. Shipley

Refrigerating Machinery Association  
Southern Bldg., Washington, D. C.  
Dear Mr. Taubeneck:

Word of the sudden passing of Mr. F. M. Cockrell, founder and publisher of AIR CONDITIONING & REFRIGERATION NEWS, comes as a shock to the members of the Refrigerating Machinery Association. Mr. Cockrell was a personal friend of most of us, and the loss of his constructive work in the interests of the refrigeration industry will be sorely felt.

On behalf of the officers and members of the Refrigerating Machinery Association, I extend to you and your associates, and to Mr. Cockrell's family, our sincere sympathy.

W. S. SHIPLEY, Pres.

### Ivan Corcoran

Square D Co.  
Regulator Div.  
6060 Rivard St.  
Detroit, Mich.

Dear Phil:

To say the least, I was shocked at the death of Mr. Cockrell. I admired him very much for what he has accomplished, and his death means a great loss to the industry. You fellows will just have to carry on for him.

Your write-up on my part of the recent REMA program was fine. I appreciate very much the amount of space given to the matter of Standards. Thanks again for the way you handled the matter.

IVAN CORCORAN

### Van D. Clothier

Van D. Clothier  
Manufacturers' Representative  
1015 E. 16th St., Los Angeles, Calif.  
Dear Phil:

It was a shock to read of Mr. Cockrell's death in the May 29 issue of REFRIGERATION NEWS. The industry has lost a great leader and friend.

I was always an admirer of Mr. Cockrell and I am sure he will be missed greatly by his many friends and acquaintances.

VAN D. CLOTHIER



## More Tributes To F. M. Cockrell

### J. J. Leonard

Seeger Refrigerator Co.  
St. Paul, Minn.

Dear Sir:  
I was greatly shocked to read in the News this morning about the passing away of Mr. Cockrell. I have known him since the first issue of the News and had hoped he would be with us many more years. I had no idea he was ill. You and all your associates have my deepest sympathy.

J. J. LEONARD

### F. A. Eustis

The Virginia Smelting Co.  
Chemical Manufacturers  
P.O. Box 1422, Boston, Mass.

Gentlemen:  
We read with deep regret of the death of Mr. F. M. Cockrell. The paper he has built has been a real service to the refrigeration industry. Please accept our appreciation of what he has done, and our sympathy for his loss. If you can properly extend our sympathy to his widow and daughter, we shall appreciate it. F. A. EUSTIS, Treas.

### Charles Logan

Superior Valve & Fittings Co.  
1509 W. Liberty Ave.  
Pittsburgh, Pa.

Dear George:  
I feel I have lost a friend, and the industry has lost one of its most outstanding figures, in the death of F. M. Cockrell. My sincere sympathies to his family.

CHARLES LOGAN

### Jesse W. Page

National Air Conditioning Association  
1603 Power & Light Bldg.  
106 W. 14th St., Kansas City, Mo.

Dear Sir:  
It was with extreme regret and a feeling of personal loss that the writer and the members of this association heard of the passing of Mr. Cockrell.

The encouragement and sound advice given the directors of this young and struggling association by Mr. Cockrell this past January in Chicago was of inestimable value in the carrying forward of this organization and its activities.

The family and yourself and the other members of the organization of the AIR CONDITIONING & REFRIGERATION NEWS have the sincere regrets of the writer and of the National Air Conditioning Association.

JESSE W. PAGE, JR., Pres.

### R. J. Quinn

Mathieson Alkali Works, Inc.  
60 E. 42nd St., New York, N. Y.

Dear George:  
I am terribly sorry to hear about Mr. Cockrell. Please accept this expression of sympathy to you and your associates. Mr. Cockrell was a grand person and I know that you and the industry will miss his personality and his influence for many years to come.

R. J. QUINN,  
Asst. Gen. Mgr. of Sales

### Walter P. Davis

Air Conditioning Council of  
Western New York  
Room 1001, Electric Building  
Buffalo, N. Y.

Dear Mr. Knowlton:  
Will you kindly express to the management our deep sympathy on the death of Mr. F. M. Cockrell.

While it is only recently that I became acquainted with Mr. Cockrell, I wish to say that on behalf of the Council we deeply appreciate the many services which Mr. Cockrell's organization made available to us through their paper in the last three years.

We sincerely hope that Mr. Cockrell's death will make no radical change in the magazine or its policies. We again express our deep regret.

WALTER P. DAVIS, Exec. Secy.

### H. H. Hubbell

Brass & Copper Sales Co.  
2817 Laclede Ave., St. Louis, Mo.  
Gentlemen:

We were very sorry to hear of the death of F. M. Cockrell and wish to extend our sympathy to his co-workers.

H. H. HUBBELL

### W. L. Noelle

Lewis & Noelle  
100 E. Ohio St.  
Chicago, Ill.

Dear George:  
It was indeed a shock this morning to learn of Mr. Cockrell's untimely and unexpected death. Both Gordon and I wish to extend our deepest sympathy.

W. L. NOELLE

### L. S. Morse

York Ice Machinery Corp.  
York, Pa.

Dear Mr. Taubeneck:  
It was with the deepest regret that I learned of the untimely death of Mr. F. M. Cockrell, founder of the News.

Though I have only known Mr. Cockrell for the last five years, which acquaintance was brought about by our joint activities in the American Society of Refrigerating Engineers, I was greatly impressed by his sincerity.

In your splendid editorial, in which you wrote that an institution is the lengthened shadow of one man, you affirmed that the News would be carried on with the same independence and the same honest principles which characterized Mr. Cockrell's management. The industry will now expect you to do this, and it will be your finest tribute to Mr. Cockrell.

Mrs. Morse and I hope that you will extend our deepest sympathy to Mr. Cockrell's family.

L. S. MORSE,  
Executive Engineer

### S. A. Knisely

The Associated Business Papers  
369 Lexington Ave.  
New York, N. Y.

Dear Mr. Taubeneck:  
We were terribly shocked this week when we opened Advertising Age and found an account of Frank's sudden death. We were disappointed that we had not heard of it sooner so that we could have sent a floral offering. I had such a fine visit with Frank at Hot Springs just a few weeks ago and he seemed to be in perfect health. Because of my deep interest in N.I.A.A. I was, of course, glad to sit at his feet when I found that he was largely responsible for launching that organization twenty years ago. Also, his splendid suggestions to me, a new man on a strange job, were extremely helpful. A.B.P. is going to miss him as well as I, personally.

Our Executive Committee meets next week at which time we will want to prepare a resolution to be sent to Mrs. Cockrell. I will send it to you so that you can pass it along to her.

S. A. KNISELY,  
Executive Vice President

### Albert L. Maillard

National Air Conditioning Association  
1603 Power & Light Bldg.  
106 W. 14th St., Kansas City, Mo.

Dear Mr. Taubeneck:  
I was greatly shocked to read in the News of the passing of Mr. Cockrell.

So impressed was I with his personality and ability that I felt that he was a friend of long standing. I can imagine what a blow it must be to his family and the staff who have been associated so long with him.

May I offer my heartfelt regrets to his esteemed family and to the members of the organization and assure you that I appreciate the invaluable help that was given to me personally by Mr. Cockrell.

ALBERT L. MAILLARD,  
Executive Secretary

### Bert Natkin

Natkin & Co.  
Commercial Engineers  
3920 Lindell Blvd., St. Louis, Mo.

Dear Sir:  
It was with extreme regret that our company learned of the passing of your Mr. Cockrell. His work in connection with the development of the splendid service rendered by your company has been invaluable to the air conditioning industry.

His loss will be deeply felt by all of us but in the continuation of the AIR CONDITIONING & REFRIGERATION NEWS, we feel that his work will live on and reap a great harvest of his chosen field.

Please extend our sympathy to his family in behalf of our entire organization.

BERT NATKIN

### F. S. McNeal

Universal Cooler Corp.  
Detroit, Mich.

Dear friend George:  
The executives of Universal Cooler Corp., as well as the members of the McNeal family were shocked when they learned of the sudden passing of Mr. Frank Cockrell.

Adequate words do not come to me, George, at a time like this, to express what I would like to say about Frank Cockrell. I valued his friendship and respected his ability and judgment very highly, and I am certainly going to miss counselling with him from time to time.

Last Tuesday, Mrs. McNeal called me from the house, after she had noticed an item in the morning paper. She just couldn't believe it was about our friend Frank Cockrell. The Cockrells live three or four blocks down the street from us and we see them about once a week at the Golf

Club; Frank and I always took a little time to "chew the fat" about the refrigeration industry.

I am going to take the liberty of asking a favor of you. Should you have an extra photograph around, such as the one used in the May 29 issue of the AIR CONDITIONING & REFRIGERATION NEWS, I would certainly like to have one, which I shall value very highly.

Congratulations on your appointment as successor to Mr. Cockrell. Also, I am delighted to pass on to you the best wishes of the executives of Universal Cooler. We have every confidence that the paper, which we like to think as part of us, will continue to be a success.

Sometime in the near future, I would like for you to have lunch with me, which will afford us the opportunity of becoming better acquainted.

F. S. MCNEAL,  
President

### R. M. McClure

Refrigeration Equipment  
Manufacturers' Association  
111 W. Washington St.  
Chicago, Ill.

Dear Mr. Taubeneck:  
Just a few lines this morning to extend sympathy to your associates and yourself, particularly to Mrs. Cockrell and Miss Helen Cockrell in your bereavement over the loss of Mr. F. M. Cockrell.

And, to all of you, may we also give you our assurance that it shall be our purpose to give you every assistance at our command in "Carrying on" in the way Mr. Cockrell would have us do.

Personally, I have been very favorably impressed not only with the manner in which you reported his death but particularly so with the tone of your announcement with

reference to policies and management of the Business News Publishing Co. and the AIR CONDITIONING & REFRIGERATION NEWS.

R. M. MCCLURE,  
Executive Secretary

### Julien Elfenbein

House Furnishing Review  
1170 Broadway, New York, N. Y.

Dear George:  
The death of your boss came as a terrible shock to me. We spent some pleasant hours together in Hot Springs in April, and he seemed in such excellent spirits and good health, that it is almost unbelievable that he should be no longer among us.

I thought the world of Mr. Cockrell, and I know that you would rather never have been publisher than to have become so this way, but no one is better able to step into his shoes than yourself.

I hope you will carry on for many, many years with mounting success.

JULIEN ELFENBEIN, Editor

### Henry W. Merkel

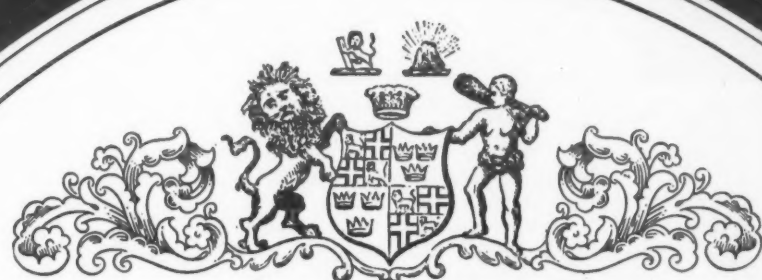
The Merkel Brothers Co.  
Plumbers, Steam & Refrigeration  
Supplies  
Cincinnati, Ohio

Dear Mr. Taubeneck:  
I was very much grieved and shocked to hear of Mr. Cockrell's untimely death.

I know that his genial and vital presence at the various gatherings of the refrigeration industry will be sadly missed and that all factors in this industry have suffered a severe loss.


Please extend my sincere sympathy to the members of his family and of your organization.

HENRY W. MERKEL



**THIS IS THE COAT OF ARMS OF U. S. GRANT**

*The Symbol of a Man Loved by Many, Feared by Some,  
but Respected by All*




**THIS IS THE SYMBOL OF UNIVERSAL COOLER CORP.**

*Who Make a Better Product to Command Respect*


Superiority, when intelligently directed, always commands respect. As suppliers of condensing units to leading manufacturers of refrigeration equipment, we have attained a position in this field that is evidence of our quality. No accident that—our sole purpose is to make trouble-free, smooth operating, quality units that deliver incontestable satisfaction. Manufacturers are invited to write for complete information!

**UNIVERSAL COOLER CORP.**  
DETROIT, MICHIGAN  
In Canada: Universal Cooler Co. of Canada,  
Ltd., Brantford, Ontario



**Artic**

*The Preferred METHYL CHLORIDE  
for Service Work... Backed by  
Du Pont Technical Assistance*



**PROMPT DELIVERY COAST-TO-COAST**

**E. I. DU PONT DE NEMOURS & CO. (INC.)**  
The R. & H. Chemicals Dept.  
Wilmington, Delaware  
District Sales Offices: Baltimore, Boston, Charlotte,  
Chicago, Cleveland, Kansas City, Newark,  
New York, Philadelphia, Pittsburgh, San Francisco



## Adequate Cooling Holds Seafood Sales Volume Despite Hot Weather

DALLAS, Tex.—Adequate refrigeration is the answer to volume sales of seafoods, believes F. Werser, who operates the Marine Grill here and another seafood restaurant in Henderson, Tex.

Secure in his conviction that his \$4,000 worth of refrigeration equipment will make his Marine Grill an all-season establishment, Mr. Werser is now engaged in remodeling this restaurant to provide seating capacity for 175 guests, nearly double the previous capacity. And this despite the fact that summer, the "dead" season for most seafood caterers, is at hand.

Most of Mr. Werser's equipment has been installed by the McCray refrigerator agency in Dallas. It includes an 8 x 8-ft. storage box, a dough-retarding box, freezer cabinet, and a 7-foot six-door service cabinet. The establishment also is air cooled.

"Each refrigeration unit has its own compressor and freezer unit," Mr. Werser explained, "so I can stock the very finest of seafoods here without any danger of spoilage."

"I have facilities here for storage of 1,500 pounds of fish and other seafoods, and for 500 pounds of shrimp in addition. I can get better prices by buying my stocks in quantity and from the market sources—lobsters from the Atlantic coast, shrimp from the Gulf, and trout from the Rockies."

## MERCHANT & EVANS



*For the Heart of Good Crankshaft Seals . . .*

Years ago Merchant & Evans, one of the pioneers in electric refrigeration, developed a Sylphon Bellows crankshaft seal so effective it has since been used in every M & E compressor, from 3/4 hp. up to the largest commercial units.

The Sylphon Bellows is a positive seal under all conditions, a permanent seal that cuts servicing costs. For M & E it . . . "minimizes power consumption and wear . . . compressors are quieter in operation."

You can profit from the experience of those who use Sylphon Bellows . . . the seamless, jointless, time-tested "Miracle in Metal" that serves so many purposes for leading manufacturers everywhere.

Consult with Sylphon engineers. Write for Bulletin LO-511.

*Sylphon*  
SEAMLESS  
METAL BELLOWS - AND  
THERMOSTAT ASSEMBLIES

**THE FULTON SYLPHON CO.**  
KNOXVILLE, TENNESSEE

Representatives in All Principal Cities in U. S. A. and in Montreal, Canada and London, England

## Foods Frozen In an Ice Cream Cabinet Provide Deluxe Diet For Mink



Frozen food, which is still considered somewhat of a luxury by the average family, is common fare to "Flasher" (above) and his fellow mink who make their home at the Oak Park Minkery in suburban Detroit. For this furry fellow, who will someday be just another pelt in milady's fur coat, dines on a steady diet of food—principally horse meat, pork hearts, and the like—which is frozen and stored in the 12-hole ice cream cabinet shown at the left. Standing beside the cabinet is Frank B. McGinnis, caretaker of the mink ranch. Dr. C. A. Rebertisch, Detroit dentist who owns the minkery, swears he couldn't get along without this storage cabinet. Only trouble he has found with it in more than two years of steady use is that it isn't really large enough.

## 17 Servel Distributors And Dealers Named In East & Midwest

EVANSVILLE, Ind.—Appointment of 17 new distributors and dealers in various sections of the country has been announced by the electric refrigeration and air conditioning division of Servel, Inc.

These new outlets are: O. C. Whitmore, Bangor, Me.; John F. Cabeen Co., Salem, Mass.; Maronne Bros., Westerly, R. I.; Gulin Refrigeration Co., Schuylkill Haven, Pa.; Burke Radio & Refrigeration Co., Pottsville, Pa.; Gayton Equipment Co., Lexington, Ky.; Refrigeration Supply Co., Flint, Mich.; Specialties Distributing Co., Detroit; Ray Kern Co., Saginaw, Mich.

Hamilton County Stores, Inc., Cincinnati; Williams Refrigeration Service, Zanesville, Ohio; Modern Refrigeration Co., Cedar Rapids, Iowa; Missouri Refrigeration Service Co., Inc., St. Louis; H. E. Buch & Son, McHenry, Ill.; Illini Sales & Service Co., East St. Louis, Ill.; Gary Refrigerator Co., Gary, Ind.; Al Meinke Co., Madison, Wis.

## Ownership of Hussmann Distributing Co. Shifts From Close To Pringle

ST. LOUIS—Proprietorship of the Hussmann Distributing Co., distributor of Hussmann-Ligonier commercial refrigerators, has changed hands from Thos. H. Close to E. H. Pringle. All assets and liabilities have been transferred to the new owner.

The shift in ownership resulted in no change whatever in the firm's financial condition, business operations, or personnel. Mr. Pringle has been connected with the organization for five years.

## Silvis Lets Contracts To Equip Two Food Rooms

DALLAS, Tex. — Contracts for equipment of two cooler rooms for the Dallas unit of Silvis, national chain of food shops founded by J. D. Silvis, Houston, have been awarded to the Dallas branch of Kelvinator. The new unit is scheduled to be completed about June 15.

## Carbonated Cold Drinks Mixed and Dispensed By Frigidrink Slot Machine

NEW YORK CITY—An instantaneous "nickel-in-the-slot" drink mixing and dispensing machine has been placed on the market by the Frigidrink Corp. here. Insertion of a coin causes a paper cup to drop and a measured amount of cooled syrup and carbonated water go into this cup.

Water, which is pumped from a reserve supply, is carbonated and cooled before being delivered to the faucet. The syrup is also cooled as it passes through a tube before delivery to the faucet.

The motor operating the faucet arm is of constant speed within reasonable voltage fluctuations, so the net result is a cold drink consistent in quality and temperature, it is claimed by officials of the company.

C. Russell Feldman is president of the Frigidrink Corp., and R. H. Guyton, who was formerly associated with the Brunswick-Balke-Collender Co., is chief engineer.

## Frigidaire Makes Fourth Truck Condensing Unit

DAYTON, Ohio—Frigidaire's commercial and air conditioning division has added a small condensing unit for refrigerated trucks to its line of mobile refrigeration equipment. This increases to four the various models of this type of unit now available in sizes from 1/2 to 1 1/2 hp., inclusive.

Because of the increased interest in equipping smaller refrigerator bodies, the new unit, of 1/2-hp. capacity, was designed, the company announced. It is said to be especially suited to proprietors of wholesale florist shops in cities, who make daily deliveries to shops in smaller surrounding towns, frosted foods wholesalers making stops on runs of 200 to 250 miles, and others engaged in similar businesses.

Mounted to a base constructed of welded channel and angle iron sections, the unit is compactly built. It is equipped with two-cylinder, slow-speed reciprocating compressor, and uses a dual voltage, capacitor start, sleeve bearing motor with built-in automatic reset overload protection. It is finished in black baked enamel.

## 6 Minneapolis Markets Install 'Sterilamps' In Cases & Coolers

MINNEAPOLIS — Beecher-Cumming, Inc., distributor for Westinghouse Sterilamps in this territory, reports installations in six local meat markets within a month for use in display cases and walk-in coolers.

According to the distributor, markets installing the equipment report reductions in loss of weight of meats because of higher humidities possible in coolers using Sterilamps. Trimming losses also were cut, it is reported, and washing down of meats, previously necessary, was eliminated.

## A BRAND NEW SODA WATER MAKER with a BRAND NEW SALES APPEAL!



IT'S THE FAST SELLING, GUARANTEED, FOOLPROOF and COMPLETELY AUTOMATIC

## PERFA-SODA CARBONATOR

Post yourself TODAY on the amazing selling facts of the 1941 Carbonator! Here's a modern, efficient and fully automatic unit that cuts soda water costs to the core...cuts maintenance to a fraction of the usual expense...fits readily the space available for it... requires no electric current... has no motors to burn out, no belts to break... needs no attention. And it has the capacity to meet any need! Perfa-Soda is rugged, compact, mobile. It provides every user a silent, self-contained soda water maker at a new low cost! It's economical, space saving, time tested . . . and it's backed by an unconditional one-year guarantee.

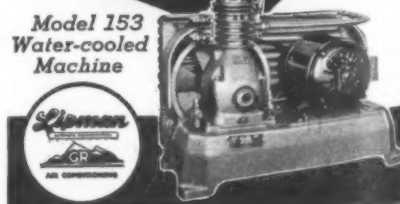
A limited number of sales territories still available. Write today for full franchise particulars. Let us send literature describing this efficient, low cost Carbonator. A request on your business stationery will bring complete information.

**HUDSON MANUFACTURING CO., INC.**  
4105 Cass Ave. Detroit, Mich.

WRITE IMMEDIATELY FOR ILLUSTRATED FOLDER



**The Machine For Your Next Job...**  
If it's a refrigeration job...no matter how big or how small...we can supply GR-Lipman equipment to fit the specifications. Let us work with you.  
**GENERAL REFRIGERATION CORP.**  
Dept. AC-3, Beloit, Wis.



MAKERS OF THE NATIONALLY KNOWN PERFA-DRAFT AND PERFA-TEMP EQUIPMENT



# Special Equipment Designed By Service Company For Testing & Repairing Refrigeration Units

*Editor's Note:* This is the third of a series of articles on the methods of operation of Bonded Refrigeration Service Associates, service firm of Youngstown, Ohio. This article deals with the special equipment used in the shop. Much of the equipment was designed and built by this firm.

By Robert M. Price

YOUNGSTOWN, Ohio—Building special servicing equipment to suit its particular needs is an important part of the planned shop set-up of Bonded Refrigeration Service Associates. The equipment used in testing, assembling, and repair operations has been built with an eye to economy as well as efficiency, and the firm's ingenuity is reflected in the material utilized.

The test-bench set-up (Fig. 1) for controls, valves, and similar devices uses a dryer oven with an immersion heater. Air and vacuum lines come to this test unit from the central air pump and central vacuum pump. By an arrangement of valves together with an air regulator which is set in the air lines, a varying amount of pressure and vacuum can be obtained by passing from the high to the low side.

On the outlet side of the valve is a manifold with different-sized orifices. These orifices are the same size as the valve to be tested. Instead of cracking the nut on the valve, a check is made by the flow through the orifice. If no pressure drop is shown, it indicates that there is no dirt or plugging. If pressure on the gauge builds up while the other stays the same, it indicates dirt or plugging.

In this set-up, it is possible to check high and low pressure controls, water valves, thermostatic expansion valves, discharge valves, constant pressure valves, snap-action valves, and other devices.

A small box fastened under this test unit contains a copper can about 3 inches in diameter, which is insulated and contains a refrigerant coil wound of 1/4-inch tubing, to-

gether with an immersion heater. There is a thermometer extending through the bench into this coil when it is in use. When not in use, the thermometer is removed to

avoid breaking. The box is used for the purpose of maintaining a temperature bath for use in checking expansion valves, temperature controls, and other devices.

## TEST FORMULA

A special system for testing valves with this equipment has been worked out to insure a thorough repair job. This "test formula," in detail, is as follows:

Before testing, be sure that air pressure "A" is approximately 70 lbs. and that temperature of bath "F" is EXACTLY 25°. All joints in the test fixture MUST BE TIGHT.

1. Inspect valve for broken capillary, stripped threads, or other mechanical damage. Inspect strainer and inside of valve for dirt.
2. Connect air line to inlet of valve, open air line and hold hand in front of outlet. Note if any moisture, excess oil, or dirt is blown out of the valve. If no air will pass through

## Control Testing Center

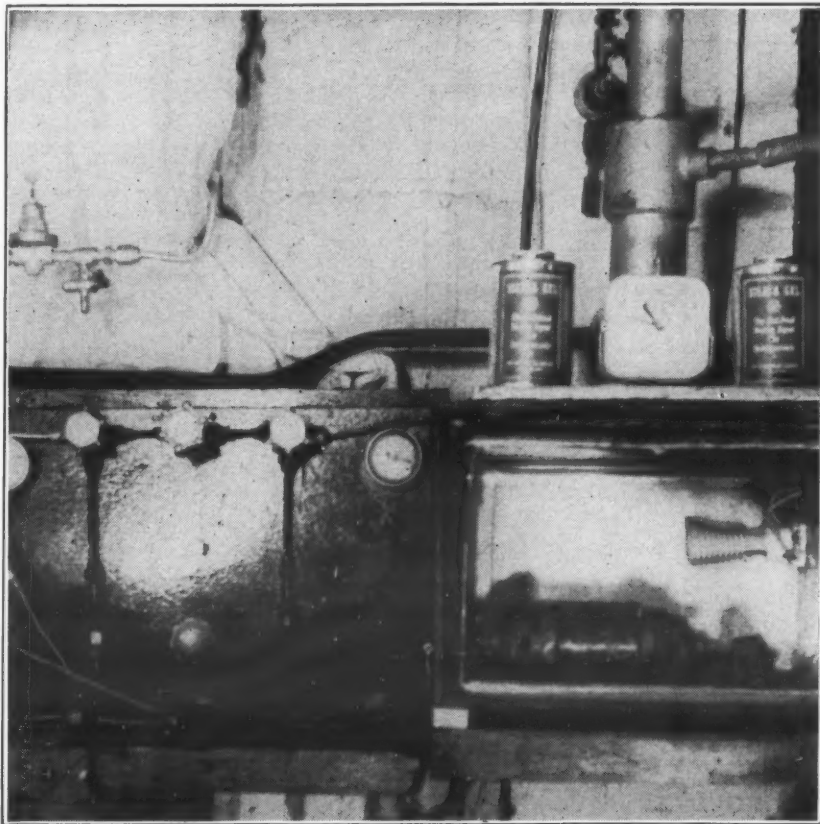


Fig. 2—The dryer oven and test-bench set-up are shown at the left above. The small dehydrating oven for dryers, which is shown at the right, contains a small heating element controlled by a time clock.

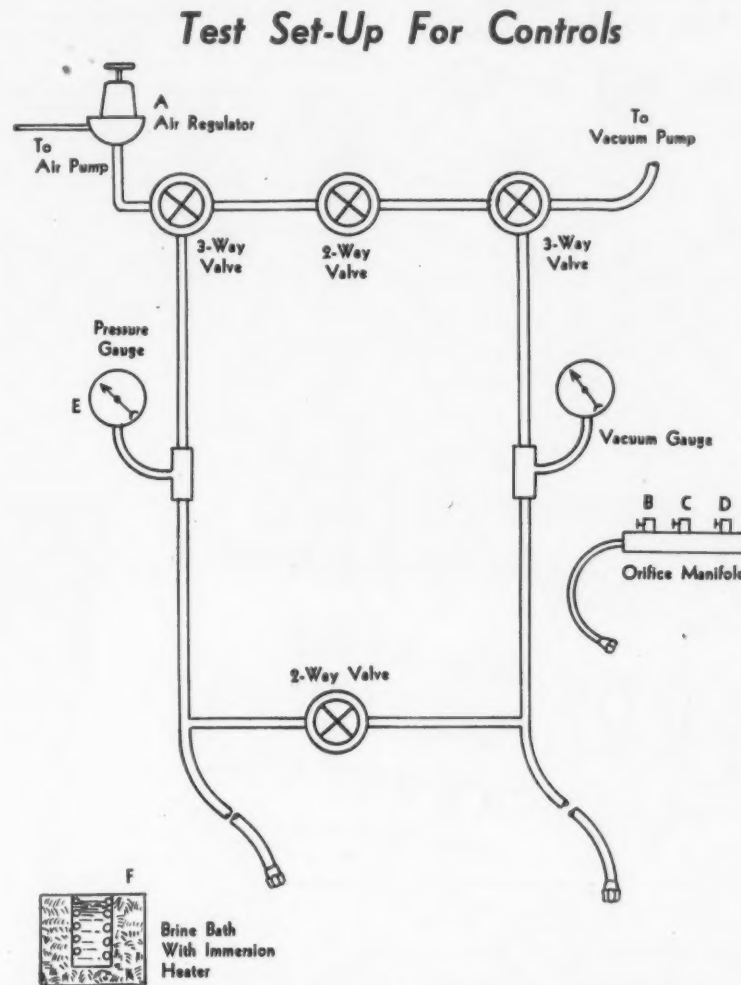


Fig. 1—The above sketch shows the method used for hooking up refrigerant valves for testing as explained in this article.

the valve, the power element is dead, or the valve is plugged.

3. If air passes through the valve, connect outlet of the valve and immerse bulb completely in bath "F." Open air line valve and orifice "B." Orifice "C" and "D" should be closed.

(a) For Nos. 673, 674, and 679 valves, gauge "E" should register in accordance with the table below.

(b) For No. 677 valves, place a finger over orifice "B" and check the needle closing point, as registered on gauge "E." This will be slightly above the pressure with orifice "B" open. Closing point of the needle should be in accordance with the table shown below.

Gauge "E" should read with valves set for	Methyl Chloride	"Freon"
5° superheat	14 lbs.	21 lbs.
10° superheat	11 lbs.	18 lbs.

If gauge reading is not correct,

and valve is adjustable type, adjust valve so that correct pressure is registered on gauge "E."

4. Tap body of valve lightly with a small wrench to determine if operation is smooth. The needle of gauge "E" should not jump more than 1 lb.

5. Check valve for partial plugging by closing orifice "B." For Nos. 673, 674, or 679 valves, open orifice "C." For No. 677 valves, open orifice "D." If pressure drop is more than 8 lbs. below reading with orifice "B" open, the valve is partially plugged.

6. Check tightness of needle and seat by closing orifices "B," "C," and "D." Pressure on gauge "E" should build up slightly and then stop, or build up very slowly. A rapid building up in pressure indicates a leaky needle and seat, which may be due to dirt.

7. Check maximum back pressure

(Continued on Page 16, Column 3)

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ometer and Swedish Fibre Carry-  
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## New Thermostat Guards Against High Settings

ST. LOUIS—A new type line voltage thermostat has been introduced by White-Rodgers Electric Co. with dial stop, locker case, and summer operating scale position.

To limit the maximum temperature at which the control may be set, the new White-Rodgers thermostat has a stop that may be adjusted only after removing the instrument from the wall. When a unit heater or furnace is installed in a store or similar location, and the control is

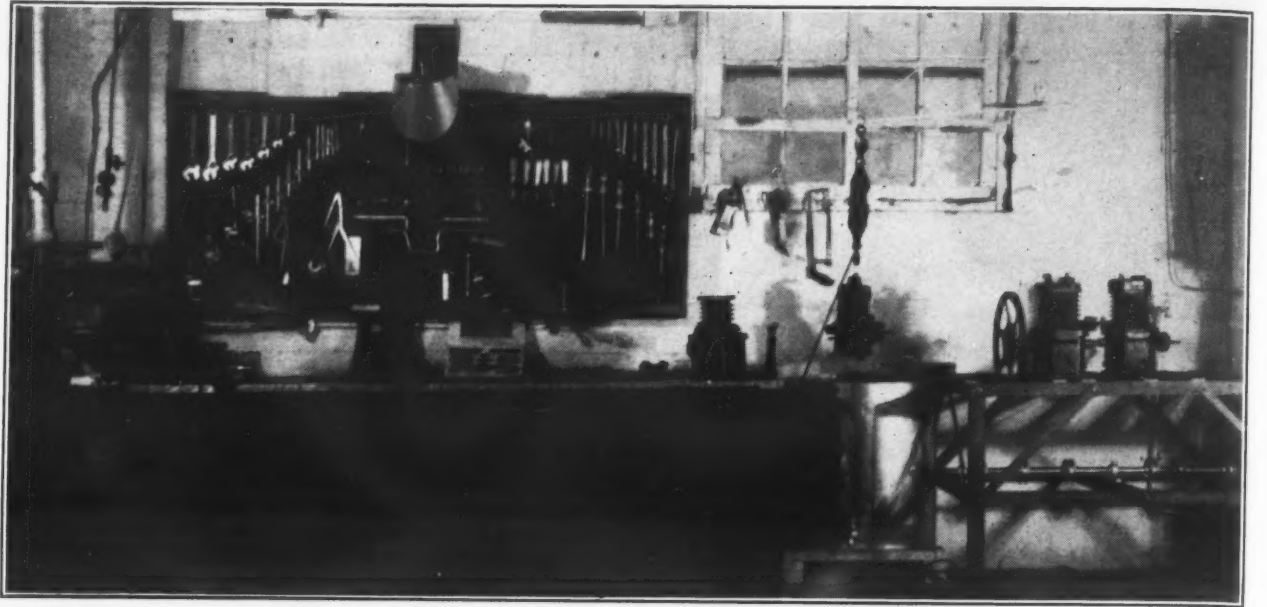
in the hands of someone other than the person paying for the heat, it is desirable to limit the maximum temperature setting of the control.

Ability to control the maximum setting also is important to the gas utilities, who have made a cost estimate in a gas installation and desire a safeguard against excessive thermostat settings.

For control of summer fan operation, the thermostat scale may be set up to "summer" without disturbing the winter temperature stop, it is claimed.

The "S" on the dial projects through the side of the case, providing a reminder that the fan should be turned off at closing time.

## Everything In Its Proper Place Is Rule For Tools



Neatness characterizes this easy-to-reach tool rack which is kept at the assembly bench. At the right is the pump-up test stand for testing compressors.

## Dryers Dried In Oven Made From Tin Can

(Continued from Page 15, Column 5) by closing all orifices and removing bulb from bath "F" and warming it in the hand. Gauge "E" should register maximum back pressure stamped on valve, or within 5 lbs. higher. Pressure on gauge should respond very rapidly when bulb is warmed up or replaced in bath with orifice "B" open.

Dirty or partially plugged valves can frequently be cleaned by washing thoroughly with carbon tetrachloride, followed by washing with alcohol, and thoroughly blowing out with dry air.

Orifice sizes are:

- B—No. 80 Drill Orifice .0125
- C—No. 55 Drill Orifice .052
- D—No. 72 Drill Orifice .025

For use in dehydrating dryers, a small oven (Fig. 2) has been constructed.

A small heating element is used in this oven. The dryers are baked in this unit for several hours at 300° F. It is controlled with a time clock. The oven itself was built from a 5-gallon can, and insulated with asbestos paper. Exterior is of plywood, and a door folds down over the front of the oven.

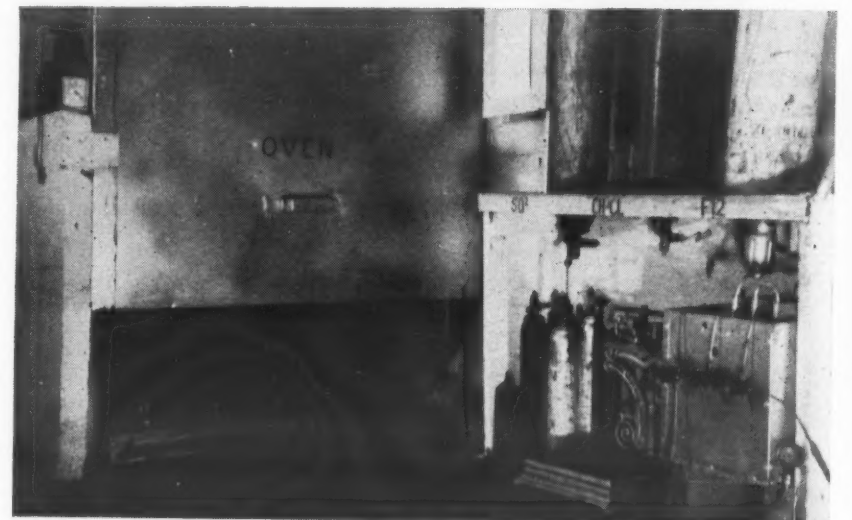
The large dehydrating oven (Fig. 4) is 6 feet long, 4 feet high, and 4 feet deep. It was built from 6-inch concrete block, using the outside wall of the building as part of the oven. It is heated by a 6-inch pipe, drilled with holes 1 inch apart. It is controlled with a solenoid valve and oven control with an electric timing device. The vacuum pump is mounted on top of the oven, and the vacuum lines extend to the assembly and test benches.

The charging rack (Fig. 4), also built in the shop, was constructed of 2 by 6 plank to hold the drums with holes for the drums to extend down for charging operations. Coils to cool the refrigerant in the transfer process lead from the compressor, mounted on the wall above the rack, to a tank, where they are submerged in an alcohol brine. The thermostatic expansion valve is set to work at about 15° F. The tank is insulated with 1-inch cork, and is copper lined. Speed of the charging operation is about 1 pound a minute.

Assembly bench (Fig. 3) is designed for speedy and careful service operations. Above the bench is a very complete set of tools, arranged so that service men will lose no time in assembling operations. A movable table is used to bring clean and

(Concluded on Page 17, Column 1)

## More 'Home-Made' Equipment



At left is the large "home-built" dehydrating oven, one side of which is a wall of the building. The vacuum pump is mounted on top of this oven, with lines running to assembly and test bench. At right is charging rack, also built in the shop.

## Diagram of Pump-Up Test Stand For Running-In Compressors Under Normal Operating Conditions

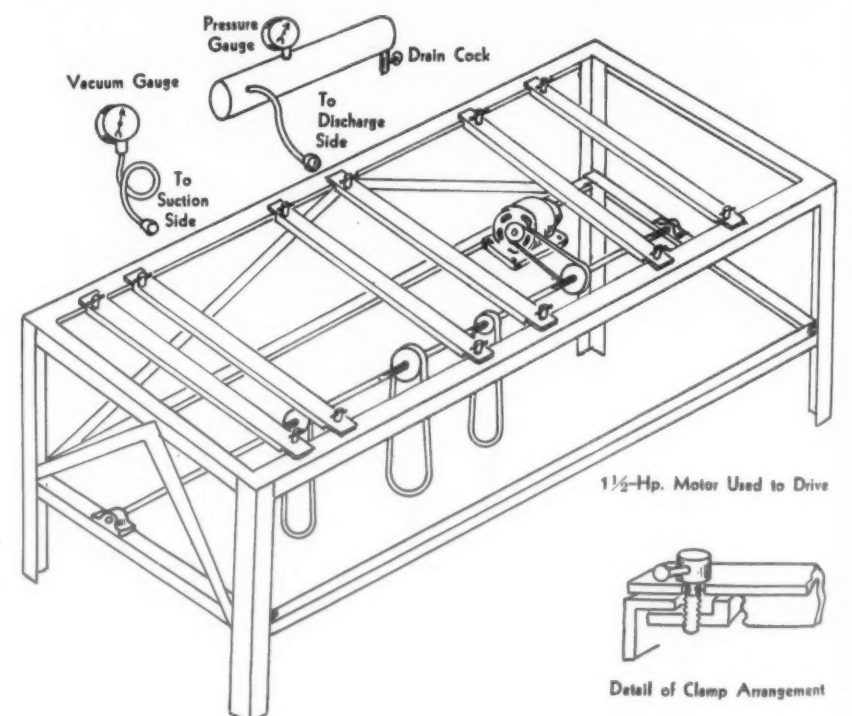


Fig. 5—The above sketch shows the pump-up test stand which is used for compressor run-ins. The driving shaft is powered by a 1 1/2-hp. motor. The sketch at the lower right shows the detail of the clamp arrangement.

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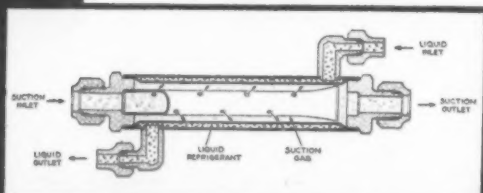
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It is designed to provide maximum heat exchanging capacity where available space is at a premium. Special combinations of inlet and outlet fittings can be furnished so that this compact unit can be adapted to your particular requirements.

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A-13730	1/2" Flare	1/4" Flare	8 1/4"	18 Sq. In.

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### Parts Cleaned; Soldering Bench Movable



Fig. 6—In the cleaning bath, pictured above, parts are cleaned first with a spray gun and then immersed in a special compound in the tank. Cleaned parts are put on the rolling bench at rear and sent to the assembly bench.

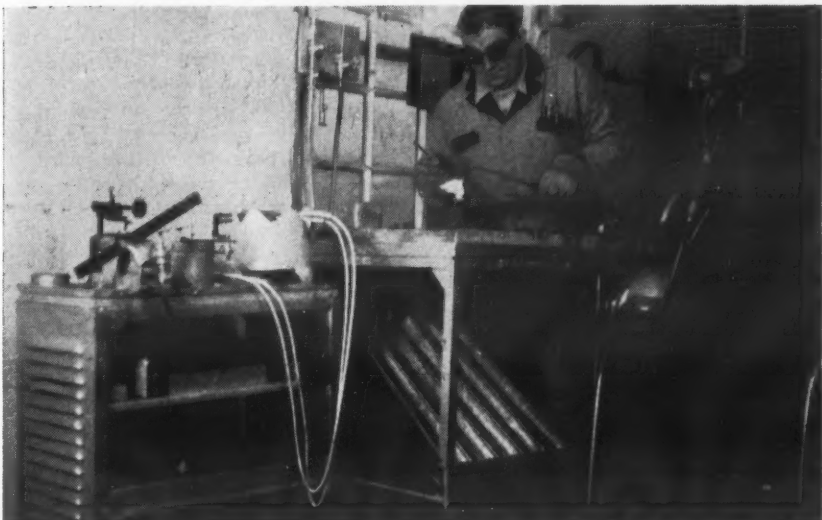


Fig. 7—Silver soldering and electric welding are done at the movable soldering bench, shown above. The equipment is connected to gas and air lines at different points in the shop. Brazing rods are held on the slanting rack under the stand.

### Special Equipment Used For Cleaning, Soldering

(Concluded from Page 16, Column 3) repaired parts to this bench for assembling.

The pump-up test stand (Fig. 5) for compressor tests is another example of the designing and assembling of special equipment. The firm has found it good policy to run-in the compressors on this stand against a test pressure of approximately what the machines would be operating on normally. This tends to seat valves better, it is said. In some instances it has been found that, where a valve leaks slightly at the start of the test, a period on the pump-up stand produces the desired tightness.

After this run-in test, the compressors are given an immersion test for leaks and frequently, it has been found, very minute leaks would be almost impossible to detect in any other manner. After this test, the units are assembled on their own base, and the complete condensing unit is then connected to a large fin coil, suspended in the rear of the spraying booth. They are then given a short running test under conditions where suction and discharge pressure are observed, to be sure the complete unit is functioning properly.

In the cleaning bath (Fig. 6), where parts and units are cleaned for assembling, the part or unit to be cleaned is set on a special rack, where it is blown off by a spray gun using a hot cleaning solution and compressed air.

Finding it easier to work on clean machinery, the company cast around for a good cleaning solution, and

discovered one that cleans and rust-proofs the parts. The solution dries, leaving a film on the parts which has no effect on oil or refrigerant, it is said. Cleaned parts are labeled and put on the rolling bench for the assembling operation.

For silver soldering and welding operations (Fig. 7), a movable stand and rack was constructed. All soldering irons and materials are kept on these racks. Beneath one stand, a slanting series of racks to hold brazing rods was constructed of eave trough. Top of the soldering bench is made of fire brick. Gas and air lines extend to different parts of the shop, so that welding and soldering operations can be completed at any repair point.

Equipment such as lathe (Fig. 8), shear, drill, and sheet metal brake have been placed at vantage points in the shop. The lathe is fitted with special drawers for tools.

### Solicit Service Business On Customers' Phones

ALTON, Ill.—Soliciting service business by telephoning prospects from the home of customers is the novel promotion idea employed by Alton Refrigeration Service Co. here.

Every woman owner of a refrigerator is usually familiar with other women who own the same make, reasoned Nick Klaffer, firm manager. He decided to try out the following scheme in building up a customer list.

On every call the service man queries the refrigerator owner on the subject and if she supplies the name of a friend, he immediately asks permission to telephone her from the customer's home.

When the friend answers, the service man informs her that he is in Mrs. Blank's home, repairing her refrigerator, and inquires whether the friend has experienced similar difficulties with her refrigerator, or whichever appliance enters the subject.

Usually the report is negative, it is said, but in many cases the woman will listen and report whatever may be wrong with her appliance. Invariably, according to this firm's experience, the solicited woman will want to speak to the first customer, and the two conversing result in the name of the firm being fixed in the solicited woman's mind.

By working on the plan a few extra moments on each service call, the firm estimates that it has built up an extra 20 to 30 extra service calls a month.

### Employee Working on 10-Inch Lathe

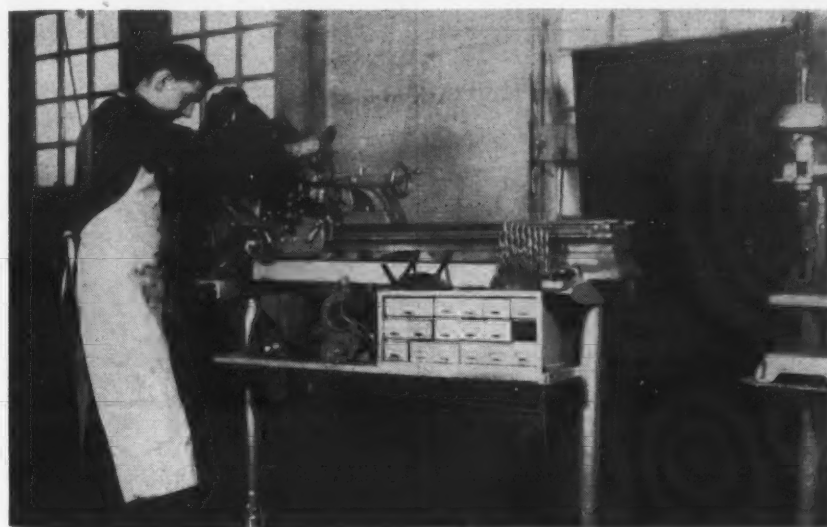


Fig. 8—An employee is shown working on a 10-inch lathe in the shop. The lathe stand has special drawers and racks to hold necessary tools.

### 'Beware Golden Offers,' Warns Educator

VERMILLION, S. D.—High school graduates who have in mind studying to become air conditioning, television, or Diesel engine technicians should go slow about signing up for courses from commercial schools that advertise unusual opportunities in any of these fields, warns A. E. Mead, president of the South Dakota Educational Association and director of the extension division of the state university.

"Such opportunities are limited,"

Mr. Mead said, "and technical experience in addition to courses of instruction is necessary to get a foothold. Agents' claims to having information about television for sale should be doubted, because television still is a closely controlled invention about which little information is in print."

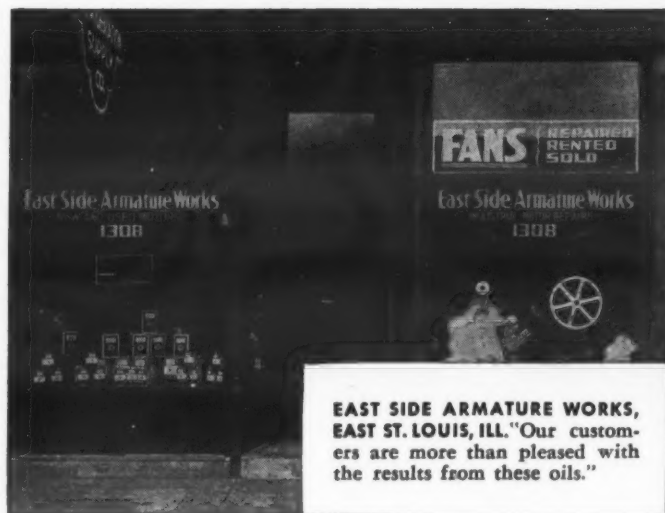
### Flushing Refrigeration Office and Shop Moved

FLUSHING, N. Y.—Flushing Refrigeration Co. has moved its office and shop to larger quarters at 36-01 Laurenee St.

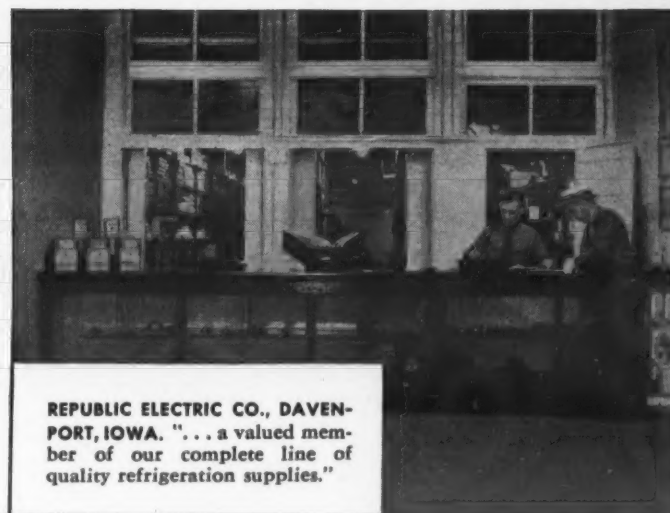
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## Frozen Foods Use Gains In Germany

BERLIN, Germany.—Development of the quick-frozen foods industry in Germany, and a description of the equipment being used in the quick-freezing process, was the subject of an article which appeared early this year in "Technische Blätter" (Technical Reports), published in Dusseldorf.

This article reported that in 1939 10 Bird's Eye system quick-freezing sets were put up in Wesermünde and Cuxhaven. From May through July of last year these units turned out 20,000 packages of fish fillets, wrapped in cellophane. These packages were frozen by an air current of  $-13^{\circ}$  F. moving at a rate of 4 meters per second.

As part of the German program to equalize seasonal fluctuations of the fish catch and make possible year-around distribution of fish, a "quick-freezing" boat of 8,000 tons gross is already under construction, this article continued. This boat will pre-cool the fish with ice before the actual quick-freezing process is applied.

Germany has already developed several types of apparatus for quick freezing, the report stated. The Rheinmetall-Borsig A.G. is building the Heckermann freezer using air currents of from  $-13^{\circ}$  to  $-40^{\circ}$  F. at speeds ranging from 4 to 10 meters per second. This freezer uses a continuous feeder system.

A very compact construction of the Heckermann type, likewise with an automatic feeder, is being built by Borsig-Loesch.

The Gesellschaft fuer Linde's Eismaschinen, Baden, has improved its freezing apparatus under Bird's Eye license. Foodstuffs are packed in thin cellophane and pressed between plates. Extremely cold air circulates between these plates. The same company also has developed a high-capacity tunnel freezer with conveyor band.

The Alfred Teves-Werke, Frankfurt on Main, is building collapsible freezing cells for spot freezing.

Interesting tests with transportation of frozen foods are being carried out by the Forschungsgesellschaft fuer Behälterverkehr (Research Association for Container

Traffic) which include the use of refrigerants as fuel on refrigerating vans, for German trucks use extensively as fuel compressed propane, the expansion cold of which can be utilized for refrigeration.

## 'Angler 'Has 'Em Cold' On This Fish Story

DALLAS, Tex.—Mrs. Harry Smith is one sportswoman who believes in backing up her fish stories with good solid proof—namely the fish themselves in a frozen state.

Mrs. Smith, it seems, recently "caught the limit" on an angling trip to Eagle Nest Lake in New Mexico.

She then took the fish to a nearby locker plant where she had them frozen, packed, and shipped to the Cullum & Boren sporting goods store here. This store used them as an crowd-stopping window display.

## 'Why' of Locker Storage Told In All-Steel Catalog

AURORA, Ill.—A new folder-catalog of the "Froz-n-Food" line of refrigerated storage lockers manufactured by All-Steel-Equip Co. has just been issued by that company.

In addition to listing sizes and shipping specifications of the various lockers, the bulletin describes and illustrates the five simple steps in the assembly of the door-type units, and lists the features of both drawer and door types.

A brief illustrated summary of the purposes of refrigerated locker storage, the methods of operation employed in the average plant, the charges made, and the investment possibilities which are offered, also is included.

## Farmers Get 'Schooling' On Locker Operation

KEMP, Tex.—More than 100 farm residents of this vicinity attended a recent demonstration of the methods employed in operation of a modern frozen foods locker plant which was conducted in the community school building here by Southern Refrigeration Co. of Dallas.

## PLANNING A NEW LOCKER PLANT?

Here Are Problems To Solve, Pitfalls To Avoid, As Outlined To Indiana Operators

LAFAYETTE, Ind.—Summary of some of the problems involved in the mechanical construction of a locker plant, and advice as to the solution of these difficulties, was offered by H. G. Venemann, professor of refrigeration at Purdue University, to Indiana locker operators when they gathered at Purdue for a state-wide convention.

After pointing out that there are a number of sources of information available to the prospective locker plant builder—such as the Rural Electrification Administration's specifications, the American Society of Refrigerating Engineers' Application Data No. 1, various consulting engineers who have made intensive studies of locker plant construction, and the salesmen for various supply houses and equipment manufacturers—Prof. Venemann went on to explain how a prospective builder could obtain the "best buy."

"All bids should be submitted on specifications prepared by a competent engineer," he declared. "These specifications must be liberal as to types of equipment, in order that all good makes may be represented, yet they must be somewhat specific as to sizes, qualities, and quantities of materials in order that all bidders will be on an equal basis. Furthermore the specifications should be clear as to who is to furnish each separate item of material or labor."

### GET A CONSULTANT

"It is recommended that the purchaser secure the services of a responsible consultant, preferably a refrigerating engineer, and have him evaluate the bids. Even a local architect, although not familiar with refrigerating equipment, would be very helpful in this respect."

"The purchaser cannot reasonably hold the refrigerating machinery contractor to guarantees as to temperatures, humidities, and power and water consumption," Prof. Venemann reminded the locker men, "unless the insulation, cold storage doors, coil baffles, and drip pans are installed to his complete satisfaction."

"As to refrigerants," he continued, "ammonia and Freon-12 are most commonly used in locker plant installations, for the reason that they possess the most satisfactory thermodynamic properties. Other refrigerants such as carbon dioxide, methyl chloride, or sulphur dioxide also may be used with safety."

"Either a single or multiple unit system may be used in a locker plant, the choice necessarily depending upon many factors, including the size of the plant, power rates, compressor efficiency, and comparative first costs."

"On the whole it may be stated without contradiction that the smaller the compressor the less its volumetric and mechanical efficiency and the greater its first cost per unit of refrigeration produced. Furthermore, three small compressors with three sets of belts, motors, and control equipment will cost more than one complete large compressor."

### ON MULTIPLE UNITS

"On the other hand, the multiple units offer a greater theoretical advantage in that each compressor is given an opportunity to operate at its most efficient evaporating temperature and pressure. Also a certain insurance is offered against total shutdown."

"High relative humidities are necessary throughout a locker plant to prevent drying out of the products stored. To achieve this effect, coil temperature should be kept as near as possible to the dewpoint temperature of the air."

"In practice the coil temperature in the chill room should be not less than  $24^{\circ}$  when the room temperature is  $34^{\circ}$ . If this condition prevailed, the coils or extended surface could operate either with natural gravity circulation or with a unit blower system."

"Too often the cause for low relative humidities is due to insufficient cooling surface or to too low a refrigerant temperature."

Launching into a discussion of insulation, the professor asserted that "a good grade of cork board

properly applied continues to hold the confidence of experienced refrigerating engineers, and is used as the standard for comparisons. Many insulation materials, some of which are less expensive than cork, are on the market, and if properly applied will give very satisfactory service."

"In all cases," he warned, "it is absolutely essential that effective waterproofing or vapor barriers be used to prevent moisture from the air migrating into the insulation and condensing within it. This is not only harmful structurally to the walls, but also reduces the effectiveness of the insulation. In most cases its damaging structural effect does not show up for several years."

"The compressor is the heart of the refrigerating system," Professor Venemann emphasized to his audience. "The ratings of compressors are often confusing to the layman. Some bidders speak of compressors in terms of 'horsepower,' while others rate them in terms of 'tons refrigeration.'"

"The latter is the correct way of expressing compressor output, but when rating a unit in this way the conditions of operation must be definitely stated."

### COMPRESSOR SELECTION

"Compressors may have one, two, or more cylinders. These cylinders may vary in diameter, stroke, and revolutions per minute in just the same way that automobile engines differ. These points determine compressor displacement in cubic inches per minute. After the displacement has been fixed, then the capacity will vary as much as 700%, depending mostly upon the evaporator pressure at which the compressor operates."

"For instance, in the case of a small two-cylinder ammonia compressor having a fixed piston displacement of 12,000 cubic inches per minute, its tons refrigeration capacity at  $-5^{\circ}$  pounds per square inch evaporator pressure is .32, whereas at 40 pounds per square inch pressure it is 2.36."

"In other words this compressor might be rated anywhere from .32 tons to 2.36 tons. A standard rating by the American Society of Refrigerating Engineers and other organi-

zations would be at 19.6 pounds per square inch evaporator pressure and 154.5 pounds per square inch condensing pressure, at which point it is 1.43 tons.

"For 'Freon' compressors, standard ratings would be taken at 11.81 pounds per square inch evaporator pressure and at 93.2 pounds per square inch condensing pressure."

"There is no law, however, to compel a bidder to use the 'standard' ratings of compressors," Professor Venemann concluded. "Therefore, if the buyer would hold a contractor to a guarantee of capacity, he must see that the conditions under which the rating is made are clearly stated in the specifications."

## New Locker Plants For Patrons In—

### OKLAHOMA CITY, OKLA.

OKLAHOMA CITY, Okla.—Frozen Foods Cooperative Corp. has been incorporated here with capital stock listed at \$10,000 to operate a cold storage locker plant and to engage in the frozen foods business.

Incorporators were: B. F. Jackson, David McKinsey, and L. L. Milner, all of Oklahoma City.

### FORNEY, TEX.

FORNEY, Tex.—Work now is under way in installation of freezer equipment for the plant of the Ice Plant & Frozen Food Lockers Co. It is expected the plant will be ready for use by July 1. It will be one of the largest and most modern in this area.

### LAFAYETTE, MINN.

LAFAYETTE, Minn.—A \$7,500 locker storage plant with a 150-locker capacity will be constructed here by Axel Azen. Provision for 75 additional lockers has been made.

### GETTYSBURG, S. D.

GETTYSBURG, S. D.—A 250-locker cold storage plant of brick and tile is being constructed here by Carl Bohnhoff. It is to be opened for business early this summer.

### ST. ANSGAR, IOWA

ST. ANSGAR, Iowa—Construction of a 300-locker cold storage plant is planned here by C. E. Rex.

## Speaking of Codes—

Long before Government regulation certain codes were in effect that did not originate with legislation—the codes of the craftsman—the codes of quality.

Quality is that which differs. The mark of excellence above standardized products. So that the only code for quality must be the code of the craftsman, jealous of his handi-work, striving for its perfection with undivided attention.

Our Company has always operated under this code. Jealous of its product's quality. Striving for its perfection with undivided attention. Governed by laws of its own making, more binding than written statutes.

No matter which of the several types of Masterbuilt completely individual food storage lockers you purchase, of which the HyDroLoc is illustrated, you can be sure of getting the best in quality as well as a locker that will meet your every need and requirement.

### Write for Particulars

on our full line of lockers. Our recent addition to the family of lockers, the Saf-T-Loc, has many new features.

Our complete line of Masterbuilt Food Storage Lockers are endorsed by distributors of refrigeration and insulation and sold only thru them.

MASTER REFRIGERATED LOCKER SYSTEMS, Inc.  
121 Main St. Sioux City, Iowa

Over 149,500 Masterbuilt Lockers in Use



## How This Big Profit Opportunity is Helping Dealers Everywhere

A-S-E Froz-n-Food UNIT Lockers are making money for hundreds of dealers. They're getting in on the ground floor of this new, fast growing frozen-food industry. You can too. A-S-E Froz-n-Food Lockers offer amazing profit opportunities—they're tops for every refrigerated locker requirement.

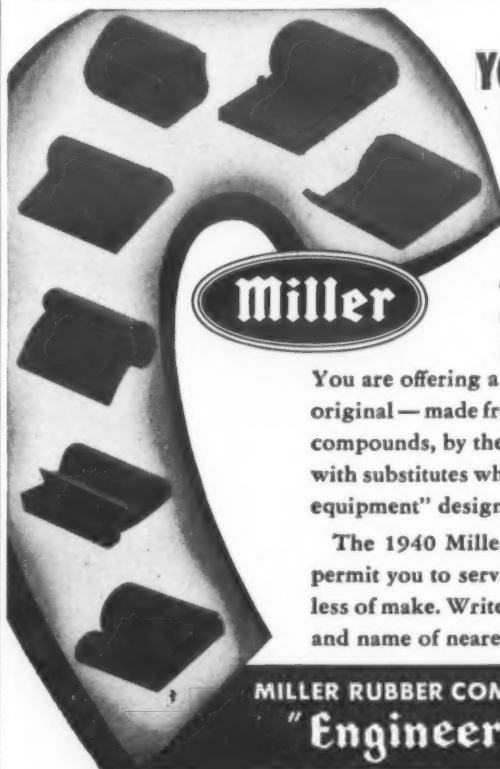
If you're interested in increasing your income—get all the facts on A-S-E Froz-n-Food UNIT Lockers. They're easy to assemble, easy to install—and there's no unprofitable servicing.

Act now—we'll be glad to give you all the details on this quick way to profits. There is no obligation.

SOLD ONLY THROUGH REFRIGERATION DEALERS AND DISTRIBUTORS

ALL-STEEL-EQUIP COMPANY

Incorporated  
106 KENSINGTON AVE. AURORA, ILLINOIS



## YOU CAN SELL MILLER REPLACEMENT DOOR GASKETS WITH CONFIDENCE

● You never need to say "these are almost as good" when you sell Miller Replacement Door Gaskets.

You are offering a product that is an exact twin of the original—made from the same dies, of the same rubber compounds, by the same manufacturer. So why bother with substitutes when you can give customers "original equipment" design and quality at no extra cost?

The 1940 Miller line offers 34 gasket types which permit you to service 80% of all refrigerators regardless of make. Write today for specification sheet, prices and name of nearest Miller jobber.

MILLER RUBBER COMPANY, INC., AKRON, OHIO  
"Engineers in Rubber"



## 168-Foot Circulating Air Display Case In Ohio Store; 7 Sections Form Single Interior

COLUMBUS, Ohio—What is said to be the largest refrigerator display case ever built is a feature of the meat department at Moby's, huge mid-town market here.

Built in the shape of a gigantic "L," the case runs across the rear of the store behind the grocery departments and turns at a right angle to follow a wall indentation toward the center of the store.

This "jumbo" case is 168 feet long, with no partitions. A continuous flow of refrigerated air circulates through the entire length of the case, which consists of seven sections joined to form one large interior. Porcelain steel trimmed with stainless steel was used in the construction. Inside depth is 42 inches overall.

M. L. Greenberg, president and general manager of Moby's, designed the unique installation, which features a slanted front engineered so as to make the entire contents visible to the customer's eye from a standing position.

### SLIDING DOORS

Meats are displayed on individual trays, quickly removable. Sliding triple doors on the rear side make all parts of the case easily accessible. Foot-wide workboards are located just below the level of the doors. Grand Rapids Cabinet Co. built the unit on special order.

This large meat case is supplemented by a wall meat display case, a fish case, and a dairy case—all refrigerated.

The wall case provides additional meat display and is 8 feet long by 3 feet deep, with two decks. Extending the short arm of the "L" is the 40-foot fish case and located at its angle is the 110-foot dairy case built as a square island. The latter two are designed on the same specifications as the big meat case.

Out in front is a full sized refrigerated show window facing on the town's main business thoroughfare. Used entirely for perishables, principally meats, the window is 17 feet in length and 8 feet deep.

Stocks are served from the basement level by electric dumb waiters. Here also is the meat freezer. Each of the store's 20 departments which handle perishables has its own storage boxes downstairs. There are 11 of these, ranging from 10 x 15 feet to the huge 50-foot square meat box. All are 9½ feet high.

### CANDY DISPLAY CASE

In addition to this elaborate outlay, the refrigeration plant handles the candy factory box on the second floor, candy display case, flower cases, an 18-foot dry foods case, and a frozen foods case. The flower cases are cooled independently by direct expansion of ammonia. The soda fountain has entirely separate units.

There are two main refrigeration units—a Frick 66 and a smaller Lipman 2010. Their combined capacity is 10 tons daily. The Frick carries ordinary daytime loads and gives some 7 tons at capacity, while the Lipman is cut in by manual control for the night shift and serves also as an auxiliary for unusually heavy periods. The two systems are automatically interchangeable in case of a breakdown.

The plant, an ammonia type, operates with a continuous circulation of brine. The cooling operation is by fin-type coils. All temperature and operating controls are fully automatic. When the brine rises above 12° F. one machine cuts in, and when the temperature reaches 16° F. the second machine goes into operation.

### CONSTANT HEAD PRESSURE

Head pressure is kept constant summer and winter at 150 pounds on the high side and 15 to 20 pounds on the low side. Suction pressure is normally 45 pounds. The compressor motors are 25 hp. each. The water supply comes from a 260-foot well and is raised by Weinman centrifugal pumps to give a circulation of 300 g.p.m.

A separate group of refrigerating systems has been installed to serve the new 244-foot soda fountain

which has a seating capacity of 122 persons. This new fountain was added as a part of the extensive spring remodeling program recently completed.

The fountain refrigerating systems are located in the same central room with the larger equipment. The controls and machines there handle all refrigeration in the store and provide convenience in maintenance.

There are five small Brunners, one for each fountain box, and a larger Brunner to handle the fountain's six ice-water systems. A Universal serves the ginger ale dispenser. This equipment, too, is entirely automatic with thermostatic controls and interchangeable provisions.

E. C. Rowe, building manager, personally checks the refrigeration equipment and handles the maintenance. Twice a year, in the spring and in the fall, factory service engineers go over the entire installation in every detail. Careful maintenance has brought Moby's a record of never a breakdown in the eight years of operation since the store was built.

## Refrigerated Display Boosts Packer's Sales

DALLAS, Tex.—Call customers are welcomed to inspect the "refrigerated display cooler room" in the new half million dollar meat packing plant of Neuhoff Bros. here. Customers calling to inspect the company's line of smoked and cured meats, sausage, and ready-to-eat specialties are provided with clean frocks before entering the cooler, where an average room temperature of 42° F. is maintained.

Air conditioning equipment for the plant's offices and industrial refrigeration equipment for the display cooler, quick loading court, hog cutting room, sausage manufacturing room, order packing room, and sales rooms was installed by Carrier. The equipment includes four brine spray units and seven cold diffusers.

In the sausage smokehouses, ducts at the ceiling admit a uniform mixture of smoke and conditioned air which is exhausted and recirculated.

## Packaged Units Cut Cost From \$150 To \$25 Per Day In Florida Hospital Refrigeration

CHATTAHOOCHEE, Fla.—"Packaged" commercial refrigeration units installed by the commercial refrigeration department of General Electric Co. at the Florida State Hospital here has reduced the daily operating cost of water cooling and refrigeration from \$150 to \$25.

These operating cost figures are from the hospital's records. In the former system an old central mechanism made ice at a single point, from which it had to be distributed manually to the various locations for use. This frequently required 15 tons of ice daily, at a cost of about 50 cents a hundred pounds.

The modern plant was installed through PWA aid. The hospital, almost a city itself, is maintained for the care of the mentally and physically afflicted people of Florida. In addition to the 4,500 inmates there are more than 800 attendants.

Early in 1938 hospital officials were faced with the problem of replacing the old central type system of refrigeration. Several large ammonia compressors, driven by steam generated power, were used chiefly for ice making.

In the dining room cold water at mealtime was furnished by placing crushed ice and water inside large barrel-type metal containers.

An exhaustive survey of the entire plant, conducted by officials of the institution in cooperation with General Electric Co. and representatives of the Florida Board of Institutions, indicated that money spent for modern refrigeration would pay good dividends in terms of dollars saved as well as in added health and comfort for the hospital's many inmates.

Now, though cooling is effected at many of the same points as previously, packaged units are in general use. Water cooling in the inmate buildings, hospitals, nurses' homes, laundry, and other buildings is done principally by General Electric self-contained water coolers.

In a few instances remote units with insulated storage tanks have replaced the old ice chests. One of the larger dining rooms, serving 1,100 inmates, is equipped with a 168-gallon storage tank of the pressure type. This tank, utilizing immersion coils, is refrigerated by a 1-hp. condensing unit.



Maj. J. L. Davis, chief engineer, examines a new G-E food storage refrigerator with Mrs. Jules Shaffer, matron of nurses, Florida State Hospital.

Exercise yards are also supplied with cooled water by remote condensing units and storage tanks.

Two water cooling jobs for X-ray developing are being used. A modern ice cube maker serves the hospitals and diet kitchens, while a G-E "conditioned air" cooling unit serves the drug room.

## Market Chain Uses Sterilamp Process

NEWARK, N. J.—Under terms of a license granted by Westinghouse Electric & Mfg. Co., Wilkinson, Gaddis & Co., owner and operator of food store and super market chains in northern New Jersey, has installed a new "Tenderay Process" meat sterilizing plant, having a capacity of 144,000 pounds of beef per week, at its distributing center here.

Ninety Westinghouse ultraviolet lamps are mounted on the ceiling of the Tenderay Process, chill, and holding rooms, in this plant. The process room contains 54 lamps, the chill room 12, and the holding room 24.

York refrigeration equipment was used. Automatic controls made by Taylor Instrument Co. were mounted on a readily visible and accessible panel just outside the processing room.

## Adds Commercial Equipment To G-E Air Conditioning Line

OSHKOSH, Wis.—C. F. Warning Co. here has added General Electric commercial refrigeration to its line of G-E air conditioning.

# SERVEL

COMMERCIAL REFRIGERATING MACHINES

Whether your requirements are large or small, standard or special, Servel engineers can help you solve your most vexing problems of commercial refrigeration or air conditioning. Write today to Servel, Inc., Electric Refrigeration and Air Conditioning Division, Evansville, Ind.

WRITE FOR OUR 1940 CATALOG

SAVING WITH

## FOR Better Coolers

New catalog shows our improved line of Direct Draws, Dry Kool Beverage Coolers, Bottle Coolers, Walk-In Coolers and other refrigeration equipment. Dealers and distributors write to Desk 40 for catalog and particulars.

UNITED REFRIGERATOR MFG., INC.  
1380 UNIVERSITY AVENUE

ST. PAUL, MINNESOTA

# TOPS for Efficient Cooling

**I MUST GET A BUSH STANDARD PANEL COOLER TO TAKE CARE OF MY HEADACHE...**

## The BUSH Standard Panel Cooler

Expertly engineered balance between surface and air speed produces maximum refrigeration with excellent humidity control. Compact design and high capacity combine to provide the ultimate in efficient and economical refrigeration for low-ceiling market coolers. Ratings are figured accurately and honestly . . . are based on ACTUAL EXPOSED SURFACE . . . and are guaranteed to make unnecessary the use of a safety factor.

The white baked enamel finish of Bush Panel Coolers is attractive, easy to clean and sanitary. Investigate the profit-making possibilities of these trouble-free, easy-to-install units in YOUR territory. Rid yourself of service headaches and installation worries. Write BUSH today for complete information and prices . . . and be sure to ask that your name be placed on the mailing list for the BUSH bulletin (the bulletin without the BULL).

PINNED TUBE PRODUCTS



# Industry Looks To South America For New Refrigeration Markets

## Educational Material In Spanish Must Be Made Available, Exporter Reports

(Concluded from Page 1, Column 3) almost no homes available. Building is booming, and the market for commercial refrigeration and air conditioning is excellent.

On the island of Puerto Rico, an extensive defense program is being pushed ahead with all possible speed. Several airports are under construction, the largest guarding the Mona pass. Giant Pan American Clippers connect the island with Miami and South American points from a base at San Juan.

Mr. Burgin is firmly convinced that air conditioning will be of great importance to the tropics, but is critical of its current stage of development. Equipment that will just "get by" in this country has no place in a tropical climate, because of its inability to handle heavy humidity loads, he declares.

According to Mr. Burgin the average American has an erroneous idea of what "tropical heat" is like. The average summer temperatures in Panama City, for example, are about 85° F. and the thermometer does not register 97° F. any oftener than it does in Detroit.

The thing that makes living conditions almost insufferable, however, is a relative humidity ranging from

95% to 99%. In the Canal Zone all kinds of documents, blueprints, rugs, curtains, and other materials become covered with mildew during the rainy season, unless kept in dehumidified lockers.

Customary method of preventing this excessive formation of mildew is to keep electric light bulbs burning day and night in lockers and closets where clothing and shoes are kept. As the temperature is increased the relative humidity drops accordingly.

Air conditioning equipment must be designed to offset these conditions before it will be of value in the tropics, Mr. Burgin believes.

Construction of older buildings in most cities located in the tropics makes it virtually impossible to install air conditioning, Mr. Burgin states. Rooms have high ceilings, windows are equipped with blinds instead of glass, and room partitions in many hotels do not reach the ceiling. This open construction permits the trade winds to blow through the buildings, providing a measure of relief for the occupants, but at the expense of ordinary privacy.

In Puerto Rico, the latest trend in apartment construction is to build these structures around a center court, or well, with a patio at the

bottom. Air enters the outside windows and is drawn through the individual apartments, thence out the inside windows and up the well, which acts as a gigantic chimney.

These newer buildings may be equipped with air conditioning without encountering the problem of excessive infiltration found in the older structures.

Ventilating equipment is widely used, and Mr. Burgin states that most of the moving picture houses showing films at popular prices are equipped with large fans which virtually "blow the patrons out of their seats."

The major problem in selling refrigeration and air conditioning in these countries is not equipment, nor building construction, lack of money, or interest in the subject. The problem, Mr. Burgin asserts, is education, particularly with respect to the installation and servicing of refrigeration. No effective penetration of the Central and South American countries will be possible until the distributors and dealers that might logically handle the products know what it is all about, he says.

As an example of this situation, Mr. Burgin cites Cuba—our nearest Spanish speaking neighbor. There are excellent service firms handling work on refrigeration and air conditioning in Havana, he says, such as Servicio General De Refrigeración.

While Americans think of Cuba in terms of the capital city, the wealth of the country lies in the



E. C. BURGIN

provinces of Oriente and Camaguey, at the other end of the island. If a butcher shop located in an outlying district needs commercial refrigeration equipment, it is too far removed from Havana for a dealer to go out and make the installation at a profit, and after the equipment is in use, there is no one available to service and adjust the units.

Consequently, refrigeration prices in these areas are abnormally high, service is poor, and at the present time one American manufacturer is getting virtually all of the business, Mr. Burgin reports.

Technical and semi-technical information about refrigeration, printed in Spanish, is sorely needed, Mr. Burgin states. When a dealer attempts to sell a commercial refrigeration job from an American catalog, he must translate each paragraph describing the equipment, and then the customer may be suspicious of a strange tongue.

### GERMAN PROGRESS

One reason the Germans have made considerable progress in marketing diesel engines and other products is that they use catalogs, pamphlets, leaflets, and even moving pictures, in Spanish.

According to Mr. Burgin, money is no consideration, once the people of Central and South America understand refrigeration and what it will do for them. The wealth is there, the need is there, but American manufacturers have not yet made the right approach to the market.

Selling and installing refrigeration in the outlying districts of the tropics often entails enormous physical hardships coupled with depressing boredom.

These conditions are too much for many Americans, who are accustomed to a life of pleasure and comparative ease. Many young men take a crack at it, but they soon come home, or "go to the dogs" completely, Mr. Burgin reports.

### FUTURE IS BRIGHT

Intimately acquainted with the life, manners, and customs of the Central and South American peoples, Mr. Burgin knows whereof he speaks. Last year he traveled 46,000 miles, visiting 21 countries. During the past 16 years he has made three business trips around the world, touching on every continent. Born in Argentina, he has an excellent knowledge of South America. He speaks four languages.

As president of the Foraco Co., Mr. Burgin feels that the future of South American trade is bright. In order to beat the Germans at their own game, he believes that Americans must become export minded. More printed matter must be made available in Spanish, more liberal credit terms must be made available, and trade must be stimulated by the purchase of South American goods.

South America cannot buy refrigerators, automobiles, and countless other American products unless we purchase its surplus of many products in return. Freight rates must be adjusted before many South American products, such as wines, champagnes, and vegetable wax can be widely used in this country, Mr. Burgin says.

While the problems are complex, they can all be solved by American business, working closely with a sympathetic American government.

## Study Shows Demand For Quality Products In South America

DETROIT—More than one hundred million potential customers "South of Panama" present today's most fertile field for the expansion of American business, in the opinion of Carl Kulberg of Women's Home Companion magazine, who recently completed a 21,000-mile Pan-American Clipper trip. Before this market can reach its potential importance, however, Mr. Kulberg declares, American business men must "learn the game" of selling the Central and South American peoples.

The thing needed most, Mr. Kulberg reports, is a better understanding of the customs, habits, business methods, and political background of the South American countries. Americans going to South America on business often have a limited understanding of how to deal with people there. German business representatives, on the other hand, are thoroughly versed in the language and manner of the South Americans.

The South American business man must be approached somewhat in the manner of a social visit, rather than in the direct ways common to life in the United States, Mr. Kulberg points out. The technique of the American salesman, who is accustomed to outlining his proposition in one hour's time, asking for the order, and demanding cash on delivery, simply will not work in South America.

In contrast, the German, who understands the psychology of the South American merchant, will call and perhaps spend several days talking about things of general and social interest. Much coffee, a little brandy, and cigars will be consumed, the conversation apparently getting nowhere. Finally the South American will say, in effect: "I like you—here is your order."

### CREDIT TRADITION

South Americans expect credit as a matter of courtesy. A firm of substantial means, well able to meet its obligations, will expect credit, simply because not getting credit means "loss of face" in the Chinese sense. When a business representative from the United States demands cash, he violates a tradition of South American business, and will never get an order, even from a firm that is well able to pay spot cash for merchandise, Mr. Kulberg asserts.

Another harmful practice is the habit of certain North American firms of unloading the cheapest kind of goods on the South American market. Mr. Kulberg reports that the South American is more awake to quality today than anyone on earth, and usually has the money to indulge his tastes.

Mr. Kulberg likes to tell a story about a merchant in Rio de Janeiro who sold haberdashery. On a visit to the United States he saw an "Arrow" shirt for the first time. South American shirts displayed in his store sold for from 30 to 50 cents. In the United States Arrow shirts sell for a base price of \$2.

(Concluded on Page 21, Column 1)

**NO HUM-M-M-M!**  
**NO CHATTER!**  
**NO SQUEE-E-K!**

... We've designed the chatter out of SUPERIOR check valves ... you can definitely bank on that!

... Opens and closes tightly below six ounces pressure ... Minimum of pressure drop ... All internal parts removable for soldering lines to valves, or for future inspection of parts, without removing valve from line.

**TRULY—A SUPERIOR CHECK VALVE**

Sold by leading jobbers everywhere ... Write for Catalog

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*"Because of its diversified coverage, excellent editorial material, weekly distribution, and all paid circulation, we have considered Air Conditioning & Refrigeration News first on our advertising list."*

*"Consistent advertising in your publication has, we believe, contributed much towards the rapid growth of our company since its inception April 1938."*

K. M. Newcum, V. P. & Sales Mgr., Superior Valve & Fittings Co.

We particularly appreciate Mr. Newcum's comment in regard to advertising in the NEWS contributing to "rapid growth."

New companies coming into the industry may take many leisurely years to become recognized and established—or they may shorten that time by advertising in the NEWS.

Superior got action. So do others.

**Air Conditioning & Refrigeration News**  
"The Newspaper of the Industry"

## Anaconda Copper Refrigeration Tubes

New cup seal keeps them clean and dry



THE AMERICAN BRASS CO.

FRENCH SMALL TUBE BRANCH  
General Office: Waterbury, Conn.



## Ice Cream, Cold Drinks Pave Way For Advance of Commercial Refrigeration

(Concluded from Page 20, Column 5)

Taking what he considered a "terrific gamble," the merchant ordered a quantity of Arrow "seconds," which he could sell in Rio for around \$2.50. The supply was soon exhausted, so he took another long chance and stocked a quantity of Arrow "firsts," which had to sell for from \$3 to \$4.

Today this merchant is doing a brisk business in high-priced shirts, and, according to Mr. Kulberg, his customers have learned to demand quality merchandise. South Americans are just as conscious of well established and well advertised products as any North American, Mr. Kulberg says.

The introduction of ice cream into many South American countries in recent years has created a demand for commercial refrigeration, Mr. Kulberg states. The South American people are extremely fond of ice cream, and have learned to prefer it to many native desserts and beverages.

"It is hard for us to believe," Mr. Kulberg says, "but last year saw the first Coca Cola in the city of Trinidad. The response was immediate and overwhelming." Refrigeration goes hand in hand with this type of business.

Mr. Kulberg feels that people in the United States are being deprived of the finest beef in the world, because western Senators in this country fight against any attempt to introduce the Argentine variety in this country. Beef is so plentiful, and so cheap, that in Buenos Aires a steak you can cut with a fork costs 20 centavos, (30 cents U. S.) in the most expensive hotels and swankier night clubs. You can get them for 10 cents North American in many restaurants.

Citing the potential market for air conditioning, Mr. Kulberg reports

that Buenos Aires is a paradise for movie addicts. Seven-hour shows, consisting of five different pictures, are common. The houses close long after midnight.

The movie palaces are the last word in design and architecture. Chairs are roomy and comfortable, and air conditioning equipment is used in some of the better houses. The cheaper theaters are equipped with large ventilating fans, and present a virgin market for the sale of the direct expansion refrigeration cycle used in air conditioning.

It is difficult to market appliances in many South American countries, Mr. Kulberg reports, as the native women of the better classes seldom enter a kitchen, so are not interested

in devices which provide escape from "kitchen drudgery." Servants can be had for from \$1.80 to \$4 per month (U. S. money), and for this reason "labor saving" appliances are in no great demand.

There is no middle class in South American countries similar to that found in the United States, Mr. Kulberg states. The wealthy people offer an immediate market for all kinds of North American goods, and if living conditions of the poorer classes can ever be raised, even to the level of our poorest people, they will provide a tremendous market for all kinds of goods and services.

Before we can begin doing a volume of business in refrigeration and air conditioning in the Central and South American countries, our whole outlook must be changed," Mr. Kulberg asserts. We must learn "how" to do business with the South Americans in their own way, before we can attempt to regain the markets that have been lost to Germany in recent years.

## Chileans Go From No Refrigeration To Electric Variety As Habits Change

SANTIAGO, Chile—Chile has gone directly from no refrigeration to the electric variety, reports U. S. Commercial Attache Merwin L. Bohan. "The introduction of the electric refrigerator proved that customs are not an insurmountable obstacle to a new product," Mr. Bohan says.

"Naturally," the report continues, "many families had ice boxes or ice chests, but it is safe to say that there is more household electric refrigeration today than all refrigeration combined in the past. It is estimated that there are approximately 6,000 domestic refrigerators in service in Chile, and demand is continually on the increase.

"All first class apartment buildings—and a great number have been constructed during recent years—are automatically equipped with electric, or in the last three years, gas refrigerators.

"Chilean statistics have only one classification for all types of refrigerators. These report imports valued at \$103,000 in 1937 and \$102,000 in 1938. As the United States supplied 95% of the imports in the former year and 97.3% in the latter, American export statistics can be safely used as a guide. These follow:

### Four-Year Record of Exports To Chile

Refrigerators	Domestic		Commercial		Parts Value
	Number	Value	Number	Value	
1935	743	\$60,877	96	\$13,099	\$ 3,944
1936	628	49,165	47	4,014	9,111
1937	748	68,046	211	20,247	12,455
1938	964	89,112	73	7,513	17,048

"Before 1920, the use of central heating in Chile was very limited, the Chileans having the attitude toward winter warmth that is usually ascribed to the British. However, the idea of comfort was finally sold, with the result that every large office or apartment building now has central hot water heating, the same being true of a very large proportion of the residences constructed during the last six years.

"The climate is such in Chile that there are many days, from the middle of fall until the middle of spring, when it is not cold enough for central heating, but chilly enough to warrant the use of air or space heaters. It is believed that, as time goes on, the use of this supplementary heating will increase, the demand at the present time being largely supplied from Germany.

"American exports of electric heaters and ovens, believed to be almost entirely the former, have been as follows: 1937, 428 valued at \$5,016; 1938, 122 valued at \$3,135; and 1939 (9 months), 40 valued at \$1,589. The mining companies are still the best market for heavy current consuming heaters.

"The climate of Chile, closely paralleling that of the west coast of the United States, does not of itself, create a need for ventilating and conditioning equipment.

"Santiago, for example, has one completely air conditioned theater and one air conditioned night club. Ventilating equipment is used in almost all first class theaters, and is needed for a month or two in any small or crowded place.

"Probably as many as half a dozen individual air conditioning units have

been installed in offices, but none, insofar as known, in homes. Chilean statistics, under a classification reading 'electric ventilators weighing up to 20 kilos (44 pounds) net,' report imports in 1937 of \$10,100 and \$15,700 in 1938.

"The United States is credited with 14.3% of the imports in 1937 and 14.5% in 1938, the balance having been almost entirely from Germany.

"United States export figures report the shipment of 29 electric fans in 1935; 38 in 1936; 143 in 1937; and 114, valued at \$1,093 in 1938. The demand for ventilating and conditioning equipment is showing growth although, as pointed out, it is questionable whether the market will ever be of substantial proportions.

"There is a fair demand in Chile for the tank-type electric water heater. Chilean statistics have no separate classification for this item, but the classification in which it falls shows that, of total imports in 1937, 91.5% were imported through Valparaiso, and in 1938, 95.5%.

"It may thus be assumed that most of the demand is concentrated

in the Santiago-Valparaiso area. Consolidated statistics of the power company serving this area show that 916 water heaters were connected to its lines at the end of 1936; 1,073 in 1937; 1,202 in 1938; and 1,335 on Oct. 31, 1939. This would indicate an average yearly sale of 136 units.

"The trade reports no demand at all for water coolers (the Chilean does not drink ice water) or for portable humidifiers."

Because household labor is done by servants earning from \$1.80 to \$4.50 per month, Chile does not offer a particularly good market for domestic appliances. Total imports amounted to \$214,000 in 1937 and \$260,000 in 1938. Breaking down the imports for 1938 reveals that all but \$18,000 were for refrigerators, ranges, water heaters, and flatirons.

## THE BUYER'S GUIDE

### THE NEW KOCH Crispeteria



One of Many

outstanding Koch Products in the complete line of Koch Commercial Refrigerator Cabinets. Write for details concerning open territories.

**KOCH REFRIGERATORS**  
NORTH KANSAS CITY, MO.

## TRUTH

A definite source of satisfaction with any product is that it qualifies to do the work for which it is sold.

Taking equal values of raw materials one manufacturer will, more than another, produce truer products, true to type, design, and specification. He delivers "truth" as another ingredient, priceless because he charges no premium for it and accords it to his customers as their basic right.

For almost 30 years Commonwealth Brass fittings for refrigeration have been used by the industry under the guaranty, expressed and implied, that the product was, is, and will be, an expression of truth in honest brass.

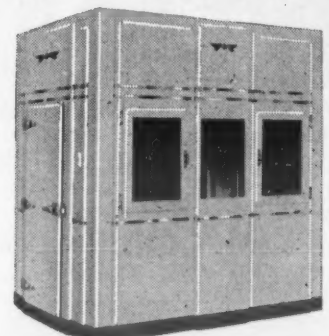
Commonwealth Fittings Are  
"Built Right to Stay Tight"

You are invited to send for a copy of our catalog No. 38.

**COMMONWEALTH BRASS CORP.**  
Commonwealth at Grand Trunk RR.  
Detroit, Mich.

**BIGGER PROFITS SELLING**  
the Sherer LINE

## YOU CAN COMPLETELY EQUIP MODERN FOOD STORES



They can be equipped from A to Z with Sherer's flexible line. It's designed to meet today's food merchandising problems. Sell refrigerators and compressors on one contract. Write for catalog and complete details.

**SHERER-GILLET COMPANY • MARSHALL, MICH.**  
Manufacturers of Refrigerated Display and Storage Equipment.

## Built for Business—RANCO Replacement Refrigerator Controls

**STURDY**, accurate, attractive! See the complete line of good-looking, long-wearing Domestic Refrigerator controls featured by your Ranco jobber. They are built for business in every sense of the word—to save your time and to please your customers.

Ranco offers Exact Replacements—ready for quick installation. No cutting. No fitting. Simply "toss out the old—slip in the new!" More than 200 of America's liveliest jobbers sell and recommend Ranco Replacement Controls.

**Ranco INC.,**  
Columbus, Ohio, USA



**Fulco quilt-edge**  
ADJUSTABLE  
**REFRIGERATOR COVERS**  
Fit any refrigerator. Reduce loss from damage in transit to a minimum.  
Write today for prices  
**FULTON BAG & COTTON MILLS**  
Manufacturers since 1870  
Atlanta, New York, Kansas City, Kan., Minneapolis, New Orleans, St. Louis.

**Filtrine**  
Water Coolers—Filters  
Cafeteria—Industrial  
Commercial Remote  
Surge Tanks Pipe Coils  
Filtrine Mfg. Co., Brooklyn, N. Y.

**KERO TEST**  
Valves and Fittings  
The Standard of the Industry  
Kerotest Manufacturing Co.  
Pittsburgh, Pa.

...At Your Beck and Call  
**THE MAN YOU NEED!**  
Call on U.E.I. for TRAINED MEN—installation and service men to this industry. U.E.I. graduates are trained as you want them trained for all positions requiring technical knowledge or mechanical ability. Our Free Employment Service is nationwide, personal, prompt. Try it.  
**UTILITIES ENGINEERING INSTITUTE**  
404 N. Wabash St. Est. 1927 Chicago, Illinois



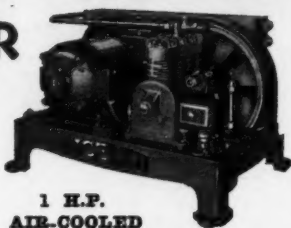
## THE BUYER'S GUIDE

### DICELER 4 CYLINDER CONDENSING UNITS

For Design, Construction and Service the most is offered by DICELER. You'll find it worth your while to get all the facts about DICELER compressors in both air and water cooled models from 1/2 H.P. to 30 H.P. Write for the DICELER catalogue and learn how you can gain greater sales and increased profits.

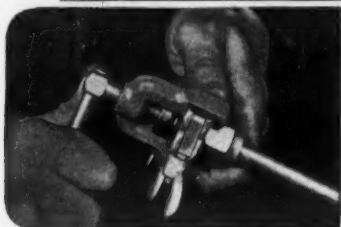
THE CONDENSING UNIT LINE WITH EXCLUSIVE FEATURES  
DEISSLER MACHINE COMPANY Greenville, Pa.  
Export Dept., 100 Varick Street, New York.

PIONEER OF FOUR CYLINDER REFRIGERATION



1 H.P. AIR-COOLED

### You can SPEED UP your flaring!



The new Imperial Flaring Tool with slip-on yoke, provides ease and speed of operation never before attained in a flaring tool. The yoke is made so that it can be slipped on over the bar without twisting or turning. The inside edges of the yoke are slotted so that once in position a slight turn holds it in place on the bar. Yokes No. 195-F Imperial Flaring Tool, flares 1/4", 3/8", 1/2" and 3/4" O. D. tubing. Price each \$4.35.

Also available for all other sizes of tubing.  
THE IMPERIAL BRASS MFG. CO., 565 S. Racine Ave., Chicago, Ill.

### IMPERIAL

VALVES • FITTINGS • TOOLS  
CHARGING LINES • FLOATS  
STRAINERS • DEHYDRATORS

ORDER FROM YOUR JOBBER

### A MODEL FOR EVERY NEED

Widest variety of standard stock sizes and styles in the industry.

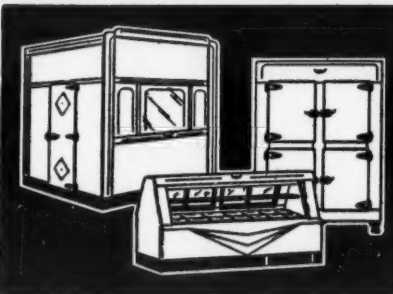
The one-quality—all porcelain line.—

Protected by

Famous Fogel Lifetime Vision.

Hundreds of successful dealers.  
Some territories still available.

INQUIRE TODAY



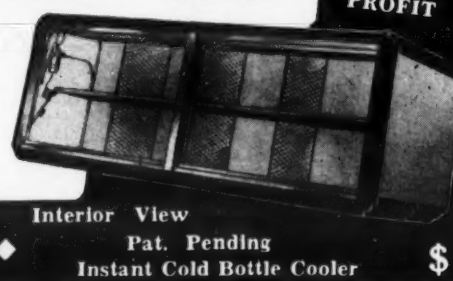
FOGEL REFRIGERATOR COMPANY, Since 1899  
16th & Vine Sts., Phila., Pa.

### PROFITS START WHEN MUZZARELLI GO ON THE JOB

BIG Complete COOLER LINE  
SOLD COMPLETE or with all equipment less the KELVINATOR UNIT

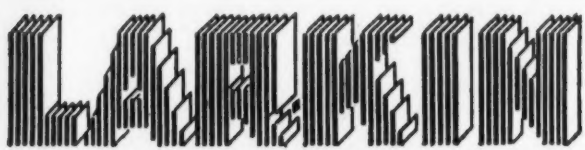
DISTRIBUTORS  
Write for  
FREE CATALOG

E. B. MUZZARELLI & CO.  
A3344-46 Main St.  
Kansas City - Missouri



Interior View

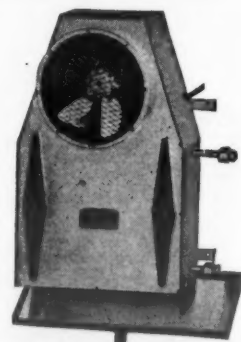
Pat. Pending  
Instant Cold Bottle Cooler



### WALL HUMI-TEMP UNITS

Share the added profits enjoyed by dealers everywhere. Sell the industry's leading forced convection unit—the Wall Humi-Temp. There's no better way of winning new customers and keeping old and new satisfied.

See your jobber or write direct to  
LARKIN COILS, INC.  
519 Fair St., S.E., ATLANTA, GA.



Originators of The Cross Fin Coil

### ACCESSORIES?



Defrosting Trays, Dishes, etc., etc.

YES, INDEED, YOU WILL FIND AN EXCELLENT ASSORTMENT IN OUR BIG CATALOG—AT THE RIGHT PRICES... AND THOUSANDS OF REFRIGERATION AND AIR CONDITIONING SERVICE PARTS, ALSO.

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3 CHICAGO BRANCHES, NORTH, WEST, SOUTH

NEW YORK  
BROOKLYN  
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NEWARK  
DETROIT  
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ST. LOUIS



### Drinking water specialists for nearly 40 years

A complete line of electric water coolers that offers every dealer an opportunity to make real money. Write for complete information.

PURO  
WATER  
TRADE MARK

ELECTRIC WATER COOLERS  
Puro Filter Corp. of America, 440 Lafayette St., New York.

## George and Edna O'Hara Give the Formula For Successful Sales & Service Business

By Robert Price

BUFFALO—Carrying the marriage partnership into business has developed a smooth-working refrigeration sales and service organization for George O'Hara and his wife, Edna, who combine talents in conducting O'Hara Refrigeration Service here.

The O'Haras employ plenty of teamwork in lining up and landing business. Mrs. O'Hara does the "inside work" on office records and phone orders, while Mr. O'Hara is the "outside" man on follow-ups and new contacts. "I pave the way over the phone," says Mrs. O'Hara, "and George goes out and lands the account."

Mrs. O'Hara's phone work is more trouble shooting than message taking, for she can trade refrigeration talk with the best of them and has added practical to speaking knowledge. Her big job is keeping accurate records of the more than 4,000 customers on the firm's books.

### NO FREE ESTIMATES

A complete folder of information is kept on each customer. Every service job has a "work card." This card carries information on the work done and the recommendations of the service man. Thus, if a customer does not have the recommended work done and his machine gives trouble on this account, the firm need only refer to the work card. This has greatly minimized kicks on call-backs.

On regular service calls, the firm has made a rule to give no free estimates for work. A minimum charge of \$1.50 has been placed on estimates. If a customer does not have the work done at the time of estimate, a two-week period is allowed. If the job is completed within that time, and the charge is over the minimum, the "estimate charge" is rebated.

Selling has become a big part of the business. The firm sells new and used commercial equipment. Some special coil jobs and beer cooling equipment is built at the shop on specification.

"Very often we sell new equipment from a single service job," Mrs. O'Hara said. "Also, by keeping after customers to whom we sell used equipment, we find that we can sell them on the idea of new equipment."

The firm's service men are instructed to sell new and used equipment whenever possible. A rule has been made never to repair a control or valve when a new one would give better satisfaction. It is up to the service man to get over this selling story to the customer.

### SERVICE MAN GETS 10%

To increase equipment and parts sales by service men, the firm offers a 10% commission for all equipment sold by the service men. In the slack season the service men are put on a salary.

The service men work in territories so that they may "know" their customers and have a better shot at follow-up sales. On repair work, the service man must make good on every job. If the repair he has made fails within 10 days, it is up to him to put the job right on his own time when the complaint is due to faulty workmanship.

If a motor or compressor has to be removed to be repaired, the firm installs a temporary part or unit so that the customer will not be without refrigeration.

"We are careful not to let the customer down," Mrs. O'Hara explained. "We want to give satisfaction and we make our service men hold to this policy."

To give this satisfaction and prevent losses from call-backs on service, the firm has made some simple rules on repair work. For instance, if the customer calls for service on a compressor, the service man never puts in only a new seal and "prays the job will hold together." The whole compressor is overhauled and each part is checked and repaired or replaced if necessary.

By doing a complete job on repairs, the firm has been able to guarantee compressor repair work for three months. If the repair goes bad within this period, the compressor is repaired free of charge.

### Serviceman Who Sells



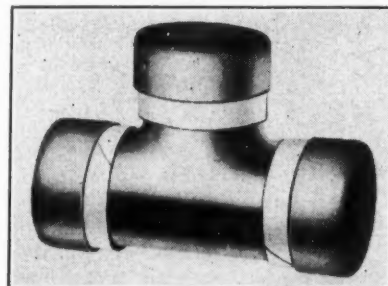
George O'Hara loads a "Sil-verdor" sold to one of his 4,000 commercial refrigeration service customers. The Buffalo built unit is equipped with a Mills compressor.

After the three-month period, the customer pays only for the labor.

On installations of new commercial equipment, the firm has learned to use the customers to make further sales. The customers in a certain neighborhood are contacted and they in turn contact their own friends. It is a case of getting customers to "talk their own language" to friends and so line up the sales on that basis.

So far the "O'Hara system" of sales approach has paid out dividends in increased business. Double-checked service, service men who sell—and get paid for it—and a wife to husband combination on both sales and service has given the business a head start toward volume. This year the O'Haras expect to move their business from their home, where it started about six years ago, to new quarters.

### Mueller Fittings Have New Protection Caps



PORT HURON, Mich.—Outlets of "Streamline" copper fittings manufactured by Mueller Brass Co. are protected in shipment by paper board caps, which are claimed to assure cleaner and more accurate fittings when used on jobs in the field.

The caps make for cleanliness, it is claimed, by insuring that no dirt or foreign particles can enter the fitting in stocking, handling, etc. by the jobber. Also, the caps are said to protect the fitting against distortion and becoming out of round in handling or shipping, assuring greater accuracy.

This method, Mueller officials say, also takes up less room in packing, and is less expensive than if the fittings were packaged in individual boxes. It is also claimed that this method has an advantage over carton packaging, since the jobber can tell just how many he has in stock without the necessity of opening a box.

The fittings are supplied either with or without a feed hole. A blue cap is used on fittings having the feed hole, a maroon cap on those not having one.

### Iowa Locker Plant Adds 30 Additional Units

GRISWOLD, Iowa—Otto Palmer, operating a meat market here, has opened a locker storage plant. Increased business necessitated adding 30 more lockers to the original 50.

### Schneck Co., Milwaukee, Moves To New Appliance Store

MILWAUKEE—The Charles W. Schneck Co., electrical appliance dealer, has moved from 1049 W. Winnebago St. to new quarters at 1333 N. 12th St.

### For Information on Motors FOR ALL TYPES OF Air Conditioning and Refrigeration Equipment WRITE TO

Wagner Electric Corporation  
1001 PLYMOUTH AVE. ST. LOUIS, MO.

Refrigeration and Air Conditioning  
**AIR PARTS-TOOLS-SUPPLIES**  
Wholesale Only  
SUPPLY CO.  
2732 N. ASHLAND AVE.  
CHICAGO, ILLINOIS  
Write for catalog on your letterhead

COMMERCIAL REFRIGERATORS  
World's most complete line of commercial cabinets—13 to 84 cu. ft. capacity.  
MIDWEST  
MFG. COMPANY • GALESBURG, ILL.



CAMPBELL REFRIGERATOR CO.  
Milwaukee, Wis.  
Dealers Wanted for Midwestern and Southern States

### BUNDY TUBING

Copper-Braced Steel. Copper Coated Inside and Out. Sizes: 1/4" to 3/4" O.D.  
BUNDY TUBING CO., DETROIT

### SPORLAN VALVES

Use CHICAGO SEALS for seal replacements  
A complete line in all sizes

CHICAGO SEAL CO.  
20 North Wacker Dr., Chicago

Send for your COPY OF "FIN COIL ENGINEERING"

REMPE CO.  
342 N. SACRAMENTO BLVD., CHICAGO, ILL.

### PENN AUTOMATIC CONTROLS AND SWITCHES

Protect the reputation of your product  
Write for Catalog  
PENN ELECTRIC SWITCH CO.  
GOSHEN, INDIANA

### GALE COMPRESSORS

Single and twin cylinder units. Engineered and manufactured to highest standards. Write for GALE PRODUCTS  
1635 Monmouth, Galesburg, Ill.

### PIONEER MANUFACTURERS OF EXTENDED SURFACE

McQuay  
MINNEAPOLIS MINNESOTA

### FOR PROFITABLE REPLACEMENT SEAL JOBS ROTARY SEAL

Rotary Seal Co., Chicago, Ill.

### The Most Accurate Control Valve for Small Capacity Systems

The "TK" Thermo Valve  
Alco Valve Co., St. Louis, Mo.



## CLASSIFIED ADVERTISING

RATES: Fifty words or less in 6-point light-face type only, one insertion, \$2.00, additional words, four cents each. Three consecutive insertions, \$5.00, additional words ten cents each.

PAYMENT in advance is required for advertising in this column.

REPLIES to advertisements with Box No. should be addressed to Air Conditioning & Refrigeration News, 5229 Cass Ave., Detroit, Mich.

### POSITIONS WANTED

YOUNG SINGLE MAN, age 26, high school and Industrial Training Institute graduate, now employed, desires new connection. Opportunity wanted with starting salary of secondary importance. Refrigeration or air conditioning. One year shop experience in manufacture of water coolers, beverage cooling and dispensing equipment. Excellent references. Box No. 1238, Air Conditioning & Refrigeration News.

REFRIGERATION SERVICEMAN wants permanent job. 17 years' experience with various factories, on air conditioning, commercial, and domestic. Positions held: Serviceman, Supervisor, Engineer, Service Manager. Will go anywhere—also experienced in electrical work. Box No. 1240, Air Conditioning & Refrigeration News.

A REFRIGERATION SERVICE man, experienced, ambitious, capable, Protes-

tant, to work for an honest, progressive refrigeration sales and service firm. CAPITOL REFRIGERATION CO., 327 River St., Lansing, Mich.

### SALESMEN WANTED

COMMERCIAL REFRIGERATOR and display case salesman of proven ability. Able to close sales personally, and capable of organizing and managing sales force. Several desirable openings in various sections of the country. Must be able to furnish bond. Salary or drawing account to qualified applicants. Write Box 1216, Air Conditioning & Refrigeration News, listing experience and qualifications.

### REPRESENTATIVES WANTED

MANUFACTURERS' AGENTS, jobbers, and dealers to handle a nationally known line of air circulators, exhaust fans, etc. Exceptional in design and a fine supplement to air conditioning. Box No. 1241, Air Conditioning & Refrigeration News.

MANUFACTURER'S representative to contact dealers and manufacturers for rapidly expanding line of liquid coolers. National promotion campaign now under way. Valuable territory franchises open. Write complete details as to past sales experience, lines now handled and territory covered. COMMERCIAL COIL & REFRIGERATION CO., 455 North Artesian Avenue, Chicago, Illinois.

### FRANCHISES AVAILABLE

DIRECT FACTORY connection. Sell Refrigerator Display Cases, Walk-In Coolers, Reach-In Refrigerators, Refrigerating Units, to Meat Markets, Grocers, Taverns, etc. Financing arrangements to help sell. Write Dept. A for full information or see EHRICH REFRIGERATOR MFG. CO., St. Joseph, Mo.

SEND FOR PRICES and literature on the General 1940 all streamlined refrigerator display case line. Over 40 years experience manufacturing good commercial refrigerators. On a comparative price test with other makes of equal specifications, prices are lowest in the country. GENERAL REFRIGERATOR & STORE FIXTURE CO., 5th & Bainbridge Sts., Philadelphia, Pa.

### BUSINESS OPPORTUNITIES

MANUFACTURING Refrigeration Parts and Service. Largest in United States doing National business by mail and for cash only. Specializing in rebuilding various domestic units, sales of parts, and a monopoly on Nationally known refrigerator and radio parts business. Volume about \$50,000 with approximate net profit of \$10,000 for past four years. For sale \$15,000. This business will liquidate for nearly this. Month's trial offered if wanted. Very good reason for selling. Full details furnished. Box No. 1239, Air Conditioning & Refrigeration News.

REFRIGERATING ENGINEER, holding fully protected designs on soundly engineered packaged locker storage units, desires to contact manufacturer of commercial equipment, or financially responsible individual, to promote production and sales. Extensive engineering and sales research completed and merchandising commitments already obtained from several leading sales organizations, assuring immediate volume outlet. Box 1242, Air Conditioning & Refrigeration News.

### REFRIGERANTS

FREEZ-O, the perfect Meter Miser replacement refrigerant, used without any change in unit construction or oil change. \$1.50 per pound. Send your cylinder to THE STANDARD REFRIGERATION CO. OF PITTSBURGH, 1148 Dohrman St., McKees Rocks, Pa.

### SERVICE SUPERVISION

MANUFACTURERS ATTENTION we can reduce your regional service costs by locating, examining, qualifying, training and supervising service outlets in the Tri-state area, maintaining your parts depot with 24 hour shipping service. Highly trained personnel, over 60 years combined experience in refrigeration and electrical field. Very complete shop. Investigation invited. BONDED REFRIGERATION SERVICE ASSOCIATES, Youngstown, Ohio.

### REPAIR SERVICE

ATTENTION ALL Western States—Complete rebuild on all hermetics including G.E., Westinghouse, Majestic, etc. Give us your headaches, all work guaranteed. GALVIN REFRIGERATION ENGINEERS, 1734 University Ave., Berkeley, California.

CONTROL REPAIR service. Your controls repaired by expert mechanics, with special precision equipment. Supervised by graduate engineers. We stress perfection and dependability before price. One year guarantee on domestic controls. Any bellows operated device repaired. HALELECTRIC LABORATORY, 1793 Lakeview Road, Cleveland, Ohio.

WORLD'S LARGEST rebuilders of refrigeration units. Original, Genuine Majestic replacement units and parts for refrigerator and radio. Rebuilders of Majestic, General Electric, Grunow, Westinghouse, Coldspot, Servel, Gibson units at \$30 with 18 months' guarantee protection bond. 500 units on hand. Send for catalog. G & G GENUINE MAJESTIC REFRIGERATOR & RADIO PARTS SERVICE, 2429 Wabash Ave., Chicago.

FREE HERMETIC CATALOG complete with prices on refrigerator units, rebuilding and exchange service. General Electric, Westinghouse, Majestic, Frigidaire and a complete stock of Grunow compressors and parts. Immediate shipment. For your copy specify catalog A. SERVICE PARTS COMPANY, 1101-3 North 24th Avenue, Melrose Park, Illinois.

### PATENTS

HAVE YOUR patent work done by a specialist. I have had more than 25 years' experience in refrigeration engineering. Prompt searches and reports. Reasonable fees. H. R. VAN DEVENTER (ASRE), Patent Attorney, 342 Madison Avenue, New York City.

## Midwest Jobbers To Meet In Davenport June 24

DAVENPORT, Iowa — Midwest Refrigeration Jobbers Association, consisting of jobbers from Kansas City, Lincoln, Omaha, Des Moines, Sioux City, Waterloo, Minneapolis, and other cities in Iowa and surrounding states, will meet June 24 at the Blackhawk hotel, Davenport.

A combined meeting in the afternoon, which will be open to manufacturers' representatives, will be held at the country home of J. S. Kimmel, president of Republic Electric Co., Davenport.

## 'Postage Free' Order Blank Used By West Coast Jobber

LOS ANGELES — Refrigeration Service, Inc., air conditioning and refrigeration supplies jobber here, has issued its 1940 catalog. Catalog contains 238 pages, listing supplies, tools, and accessories. The catalog is the largest ever compiled by the company, which has been in business since 1928.

The firm has also issued a "postage free" want order book. The order form is printed with the order on one side and a business reply envelope on the reverse side. When the order is written up, the customer merely folds the blank into an envelope. No postage is necessary as the envelope side of the order blank carries a postage permit.

Order blanks are bound in a handy-sized book, and an inserted carbon carries a copy of the order to the front side of the next blank page. When all the orders are used, the book with copies of the orders may be filed for reference.

## St. Louis Firm Increases All Sales Facilities

ST. LOUIS—Just off the press is a 212-page air conditioning and refrigeration equipment and supplies catalog for distribution to customers of Brass & Copper Sales Co., refrigeration supplies jobber.

Size of the catalog reflects an increase in stock and display space made by the company during the past months. Office quarters also have been enlarged, and an air conditioning system is being installed for the comfort of patrons and the company's staff.

A delivery truck and motorcycle have been purchased to facilitate service to customers in the St. Louis trading area, and additional personnel has been added to the company's engineering and estimating department.

## Morse Chain Wins Suit With Wisconsin Dealer

FOND DU LAC, Wis.—Circuit Judge Henry P. Lockney has signed a decision declining to receive evidence on charges of misrepresentation and contract violation filed by T. W. Meiklejohn, Inc., Fond du Lac, against the Morse Chain Co., Ithaca, N. Y., coal stoker manufacturer.

The chain firm had previously been granted a judgment on an open account against the Meiklejohn company, which acted as its distributor, and the latter firm's counterclaim for damages was denied by Judge C. F. Van Pelt.

At that time the court ruled that there might be grounds for a fraud action against the chain company. The counterclaim was then amended, and Judge Lockney was asked to hear the evidence.

Judge Lockney held that the terms of the contract "preclude me from receiving and considering the evidence offered to prove fraudulent representations."

The Meiklejohn firm charged the Morse company with violating a contract, which, it claimed, gave it exclusive rights to distribute the firm's stokers in part of Wisconsin and upper Michigan, by selling similar stokers to a mail order firm, for distribution in this territory at a lower price.

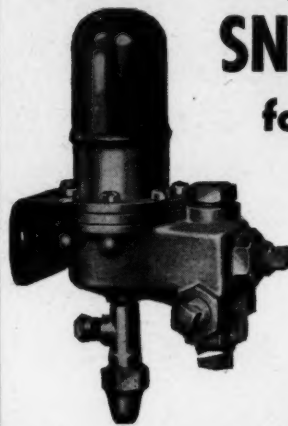
The Morse concern denied the charge and claimed that the stokers previously had been sold through the mail order firm and that there had been no misrepresentation.

## THE BUYER'S GUIDE

### SNAP-ACTION VALVE

for Multiple Temperature

by Aminco



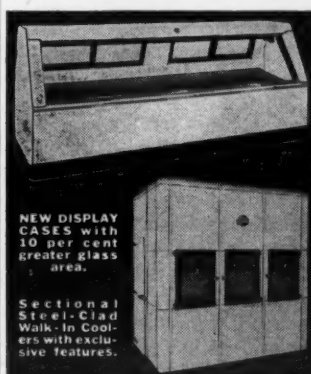
A marvelous precision valve designed for systems with more than one coil, operated from the same compressor. Any variety of units such as ice cream cabinets, soda fountains, back bars, water coolers, candy counters, beer coils, storage rooms, etc., may be connected to a single compressor unit by the use of Aminco Snap Action Valve.

Adjustable from 20" of vacuum to 63 pounds pressure. Differential 7 lbs. min. to 29 lbs. max. May be used with any refrigerant except ammonia. For flooded as well as dry gas types or any combination of either. Free from bellows strain.

Send for Bulletin No. 17

## AMERICAN INJECTOR COMPANY

1481 Fourteenth Avenue DETROIT, MICHIGAN  
Pacific Coast: Van D. Clothier, 1015 E. 16th, Los Angeles, Calif.  
Export: Borg-Warner International Corp., 310 S. Michigan Ave., Chicago, Ill.



## MAKE BIGGER PROFITS

TYLER full line dealers and distributors are setting new records for sales and profits. Tyler's big line enables you to completely outfit modern food stores and opens up hundreds of live prospects in other fields. Famous Welded Steel construction. Phenomenal values. Display cases, Reach-Ins, Walk-Ins, Vegetable Displays, and special type refrigerators to fit all needs. Every one a super value. Write for details.

TYLER FIXTURE CORP., Dept. E, Niles, Mich.

New York Office: 801 W. 26th St.  
Boston Office: 693 Beacon St. Chicago Office: 1663 W. Ogden Ave.

REACH-IN BOXES—40% greater capacity.

**TYLER** WELDED STEEL Refrigerators

## SPECIAL OFFER \$18.50

### SERVEL Model J

4 cylinder compressor! New, in original factory crates, ideal replacement unit! Complete with 1/2" SAE intake and 1/2" discharge valves and flywheel. Bore 1 1/2", Stroke 1 1/2". Current model.

Price in lots 1 to 5 \$20.50

Price in lots 5 to 10 19.50

Price in lots 10 to 25 18.50

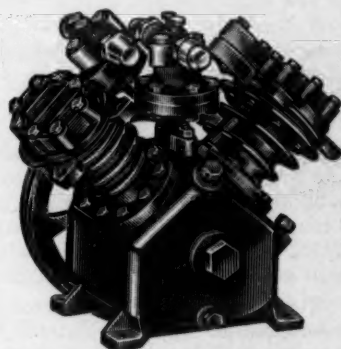
F.O.B. Chicago or Evansville, Ind.

Guaranteed Perfect . . . Terms

20% cash with order, Balance C.O.D.

NATIONAL ELECTRIC TOOL CO.

1915 S. State (Ref. Division) Chicago, Ill.



SERVEL MODEL J  
4 cylinder 1 1/2" x 1 1/2"

**Chieftain**  
1930-1940



Tecumseh Products to celebrate this week its Tenth Anniversary. Ten years of service to the industry under the same capable leadership and management that have been responsible for its rapid growth.

TECUMSEH PRODUCTS CO., TECUMSEH, MICH.

Canadian distributor: Refrigeration Supplies Co., Ltd., London, Ontario

## The New POLARTRON

FOR PRESSURE CONTROL UP TO 1 N.P.A.C.

A SINGLE Simple CONTROL THAT MEETS EVERY NEED



Eight Series 40 Polartron Advantages

Deposits "On and Off" Loads • Universal Range • Auxiliary Pressure Connections • Power Boosts to Stock • Shipping Free Service • "Loading Control" as Set Back or Set In • No Short Cycling • Polartron Compressors • Conversion Into Frost-Free Standard Unit

MINNEAPOLIS-HONEYWELL

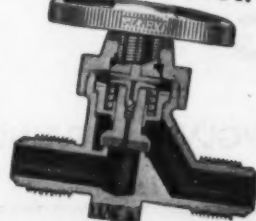
MINNEAPOLIS-HONEYWELL REGULATOR COMPANY

2407 FOURTH AVENUE SOUTH MINNEAPOLIS, MINNESOTA

REFRIGERATION

Control

## BALANCED-ACTION



RECOMMENDED

## for Easier Operation

Balanced-Action equalizes pressures on both sides of the valve seat at the instant of opening. Equalization takes place through a balancing channel located in the valve stem. This exclusive Henry feature assures that the valve will always open positively and close easily.

HENRY BALANCED-ACTION DIAPHRAGM PACKLESS VALVES

HENRY VALVE COMPANY

1001-19 N. SPAULDING AVE., CHICAGO, ILL.

AND SOLD BY LEADING JOBBERS

## Anaconda Copper Refrigeration Tubes

Dependable!



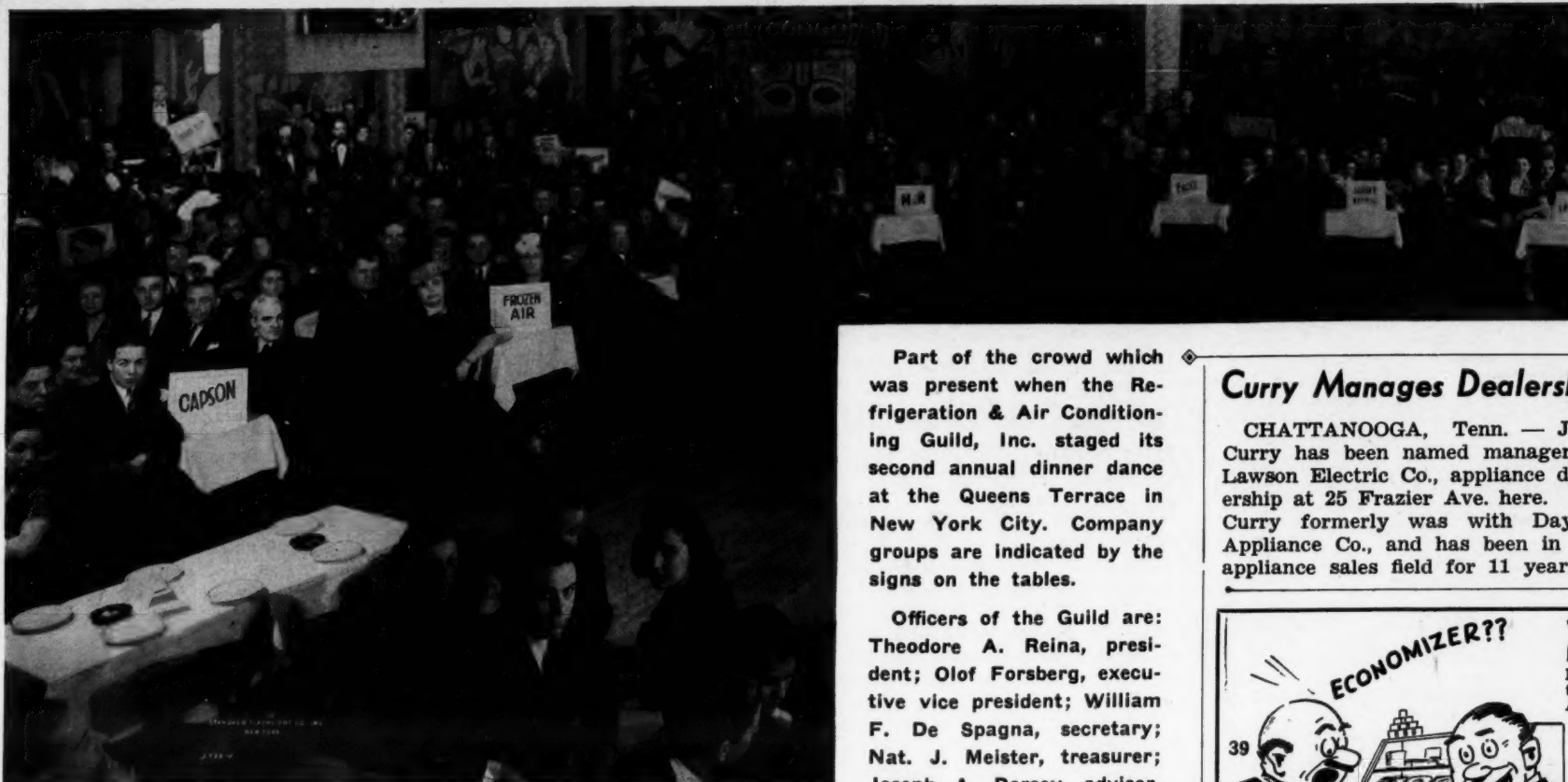
THE AMERICAN BRASS CO.

FRENCH SMALL TUBE BRANCH

General Offices: Waterbury, Conn.



## New York's Refrigeration & Air Conditioning Guild Holds a Dinner-Dance



Part of the crowd which was present when the Refrigeration & Air Conditioning Guild, Inc. staged its second annual dinner dance at the Queens Terrace in New York City. Company groups are indicated by the signs on the tables.

Officers of the Guild are: Theodore A. Reina, president; Olof Forsberg, executive vice president; William F. De Spagna, secretary; Nat. J. Meister, treasurer; Joseph A. Dorsey, advisor.

## State Supreme Court Upholds Minnesota Fair Trade Act

ST. PAUL—Constitutionality of the Minnesota "unfair practices act" has been upheld by the Minnesota supreme court. Designed to protect retail trade, the act prohibits sales below cost when intended to stifle or injure competition.

Present Minnesota statute was passed in amended form in 1939, after a Federal court had previously ruled that certain sections of the original act, passed in 1937, were unconstitutional.

Two retailers, who opposed the law, had held that the legislature has no constitutional power to regulate prices in retail trade, and that the law was unreasonable and arbitrary and tended to destroy competition as a result of price regulation.

In his opinion, Justice Royal A. Stone held that "the independent merchant, small or large, is a legitimate object of legislative solicitude."

## Curry Manages Dealership

CHATTANOOGA, Tenn. — John Curry has been named manager of Lawson Electric Co., appliance dealership at 25 Frazier Ave. here. Mr. Curry formerly was with Dayton Appliance Co., and has been in the appliance sales field for 11 years.

## Hovey Named Secretary Of Jobber Group

(Concluded from Page 1, Column 5) business secretaries), Mr. Hovey has been active in the affairs of that group.

In his work with the American Surgical Trade Association the new NRSJA secretary developed such activities as the compilation of credit information, studies of the cost of doing business and methods of compensating salesmen, compilation of the sales policies of manufacturers and importers, and the promotion of district meetings through which the distributor members keep in contact with each other.

At the board meeting at which Mr. Hovey was engaged as secretary, the N.R.S.J.A. directors voted to hold their sixth annual convention in Chicago in conjunction with the Third Annual All-Industry Refrigeration and Air Conditioning Exhibition.

The annual jobber meeting is scheduled to open on Tuesday, Jan. 14, but according to present plans most of the association's members will visit the all-industry exhibits on the previous day.

Three new member companies have been voted into the N.R.S.J.A. They are: Allen & Webb, Charleston, S. C.; Wallwork Bros., Newark, N. J.; Radio Supply Co., Cincinnati.

Directors of the jobber group also put on record a vote of thanks to R. M. McClure, former secretary of the association, for his capable handling of the organization's affairs.

## Holladay Elected Chairman Of Los Angeles ASRE

LOS ANGELES—W. H. Holladay, of the George Belsey Co., was named chairman of the Los Angeles section of American Society of Refrigerating Engineers for the coming year at the organization's May meeting, at which sessions were discontinued until fall.

Alfred Hanson, of Dreyer & Hanson, was elected vice chairman, and David D. Cornell, of California Consumers Corp., was reelected secretary-treasurer.

Proposed constitution and by-laws of the section have been distributed to members for study, with discussions scheduled to be resumed at the fall meetings.

## Mohr Predicts Great Future For Lockers

(Concluded from Page 1, Column 5) Comments on the outlook for, and non-seasonal quality of, locker plant sales came from Harvey & Mohr, 368 New Orpheum building, Sioux City, manufacturer's representative for the corporation, in regard to the expansion of the corporation's factory.

Earl L. Mohr, vice president and sales manager of the corporation before the formation last August of his partnership with James O. Harvey, then manager of the locker storage division of Patented Vacuum Plate factory of Chicago, declared that he expects the beginning summer to net the heaviest locker business on record.

"The potential possibilities of this business are hard to limit," Mr. Mohr said.

"Iowa, situated in the heart of the industry's growth, was believed by many to be approaching a saturation point a year ago. It then had approximately 400 plants. Now it has nearly 500—more than a fifth of all modern locker plants in the United States—and plants still are being built. All seem to thrive."

Mr. Harvey defined "modern" plants as those including process, chill, and locker storage rooms together with quick-freeze facilities.

Both partners declared that the outlook for expansion of business throughout the United States and Canada is "definitely beyond what we expected" and described as increasing in popularity the new 15 x 24 x 30 size locker and the 20 x 24 x 30 size drawer.

## Comments Being Sought On Enamel Standards

(Concluded from Page 1, Column 4) and adjustment of the proposed standards will follow Mr. Ewald's presentation.

Provision is also made for the appointment of a standing committee of representatives of producers, distributors, users, and allied interests, to recommend revision of the specifications from time to time, to keep abreast of progress, as is the custom of the National Bureau of Standards in the establishment of all such trade agreements.

## Pines-Natkin of Dallas Moves

DALLAS, Tex.—Pines-Natkin Co., Westinghouse air conditioning equipment distributor, has moved to new quarters at 2413 North Pearl St.

## PORTABLE COOLING UNIT Saves Space! NEW APPLICATION for AP Valves . . .

This Remcor Self-Contained Cooling Unit is moved to the outside of Saltzman's Liquor Storage Room.

It fits over the openings in the storage wall, shown here, and keeps the room at proper temperature.

Space is saved for liquor storage that formerly was taken up by the cooling unit.



Quite conceivably, more than one room could be cooled with this portable unit—simply by moving it from one to another.

As A. S. Weil, Manager of Refrigeration Maintenance Corporation in Chicago, says in his letter:

"AP" valves have been used by us—on a wide variety of applications.

Needless to say AP Valves are used on this equipment, as we found them highly satisfactory in all respects."

## MODEL 205

Thermostatic Expansion Valve Capacity:  
Commercial . . . 1 Ton Freon  
Air Conditioning . . . 2 Tons Freon  
Full liquid charged power element permits installation in any position or ambient temperature. Maintains straight line Superheat over wide temperature range.



## AUTOMATIC PRODUCTS COMPANY

2450 NORTH THIRTY-SECOND STREET  
MILWAUKEE WISCONSIN  
Export Department 100 Varick Street, New York City

PROGRESSIVE SERVICE MEN USE AND RECOMMEND—AND AGGRESSIVE JOBBERS STOCK AND TALK—AP PRODUCTS

## EASY BENDING

You get it in WOLVERINE TUBING

—Buy From Your Jobber—



WOLVERINE TUBE CO. DETROIT